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## THOUGHTS ON PHILOSOPHY AND ITS METHOD.

Translated from the German of ARTHUR SCHOPENHAUER by CHARLES JOSÉPÉ.

[CHAPTER I. OF THE "PARERGA UND PARALIPOMENA."]

§ 1. The foundation on which rest all our cognitions and science, is the inexplicable. To this therefore every exposition recurs, by means of connecting links, many or few, as on the sea the sounding-lead finds the bottom sometimes at a greater, sometimes at a less depth, but must at last reach it everywhere. This inexplicable belongs to metaphysics.

§ 2. Most men think continually, that they are a certain man, this or that man (τις ἄνθρωπος), together with the corollaries that follow from this thought; but seldom do they think that they are man in general (ὁ ἄνθρωπος), though that is the main point. Those few, who indulge in the last idea more than in the first, are philosophers. The tendency of the others is to see in general in all things nothing but the single and individual, not the general. Only those spirits who are highly endowed, see in single things, according to their greatness of genius, more and more that which is common to all. This important difference penetrates the whole cognitive faculty in such a manner as to extend to the contemplation of the most common things; these, therefore, present entirely different phases to the man of genius and the common man. This comprehension of the general in the individuals, which alone present themselves, is harmonious with that which I have called the pure, will-less subject of cognition and set up

as the subjective correlate of the Platonic idea; because the cognition can remain will-less only when it is directed to the general; the objects of will lie in individual things; therefore the cognition of animals is strictly confined to the individual, and their intellect in consequence remains exclusively in the service of their will. On the contrary, that direction of the mind to the general is the indispensable condition of genuine achievements in philosophy, poetry, arts, and sciences.

For the *intellect in the service of the will* — that is, in its practical use — there exist only individual things; for the intellect which devotes itself to arts and sciences — that is, which is active for itself — there are only generalities, whole kinds, species, orders, *ideas* of things, since even the plastic artist intends to represent in the individual only the idea — that is, the genus. This rests upon the fact, that the *will* immediately is only directed upon individual things: they are its proper objects; for only those have an empirical reality. Ideas, species, orders, on the contrary, can only very indirectly become its objects. Therefore the inexperienced man has no comprehension of general truths; but the genius overlooks and neglects the individual; the enforced occupation with single things as such, as it forms the subject-matter of practical life, is to him nothing but a burdensome socage.

§ 3. The two primary requisites to philosophy are these: firstly, that one have the courage to hold no question back from discussion; and secondly, that he bring clearly before consciousness everything that is *axiomatic*, in order to be able to conceive it as a problem. Lastly, it is necessary to true philosophizing that the mind be really unbiased; it must not pursue any aims, and therefore not be influenced by the will, but must devote itself wholly to the information which is given to it by the intuitive world and its own consciousness.—Professors of Philosophy, on the contrary, take into consideration their personal advantage and profit, and whatever leads to it; hence their earnestness. Therefore they do not perceive at all many obvious things; nay, they never come to a clear understanding even of the problems of philosophy.

§ 4. The poet brings to the imagination pictures of life,

human characters and situations, puts everything into motion, and leaves it to everybody to think about those pictures as far as his power of mind is enabled to grasp them. Therefore he can amuse men of the most different faculties, even fools and wise men at the same time. But the philosopher does not bring the life itself but the finished thoughts which he abstracted from it, and asks now that his reader think exactly so and just as far as he did himself. On this account his public is necessarily very small. The poet, therefore, may be compared to him who brings the flowers; the philosopher, to him who brings their quintessence.

Another great advantage which poetical labors possess over philosophical ones is this, that all the works of the poets exist side by side without interfering with each other,—even the most heterogeneous of them can be enjoyed and esteemed by the same mind; while each philosophical system, as soon as it has appeared, endeavors to ruin all its brethren, just as an Asiatic sultan does at his entrance into power. For, as there can be but one queen in the beehive, so there can be prevalent but one philosophy. The systems are as unsocial in their nature as spiders; each sits alone in its web, and watches how many flies may be caught in it, but approaches another spider only to fight with it. Therefore, while the works of the poets peacefully pasture side by side like lambs, those of the philosophers are born voracious beasts, and their longing to destroy is even like scorpions, spiders, and some insects, chiefly directed towards their own species. They come forth into the world like the harnessed men from the sowing of the dragon's teeth of Jason, and all of them have hitherto, like these, destroyed each other. This combat has endured already more than two thousand years; will there ever result from it a last victory and an eternal peace?

In consequence of this essentially polemical nature, of this *bellum omnium contra omnes* of the philosophical systems, it is infinitely more difficult to acquire any importance as a philosopher than as a poet. All that is demanded by the work of the poet of the reader, is to give himself up to the entertaining or inspiring writings, and to devote himself for a few hours. But the work of the philosopher, on the contrary, demands a change in his entire manner of thinking; it

demands of him that he declare as error everything that he has learned and believed in this province, that he regard his time and trouble as lost, and that he begin anew; at most, it leaves him a few rudiments of a preceding system from which to make his basis. Besides this, he finds an opponent *ex officio* in every teacher of a system already existing; nay, even the state sometimes takes some system chosen by it under its protection, and prevents by its powerful, material means, the rising of every other system. Consider further, that the number of the philosophical public is to that of the poetical as the number of people who want to be instructed is to those who want to be amused, and one will readily judge, *quibus auspiciis*, a philosopher makes his appearance. But, in return for this, it is the approbation of the thinkers, of the elect of long periods, of all countries, and of all nations, that recompenses the philosopher. The multitude gradually learns from authority to honor his name. In consequence of this, and because of the slow but deep influence of the course of philosophy upon all mankind, and since the history of philosophy for thousands of years marches beside the history of kings, and counts a hundred times less names than this, it is something great to secure for one's own name a fixed place in it.

§ 5. The philosophical writer is the guide and his reader the wanderer. In order to come together, they first of all must start together; that is, the author must take his reader from a point of view which they surely have in common; but this can be no other than that of the empirical consciousness common to all of us. Here he must firmly take him by the hand, and now try how far above the clouds he may reach with him by leading him step by step on the mountain-path. This is the procedure of Kant: he set out entirely from the common consciousness, as well of the thinking subject as of other things. How incorrect, on the contrary, would it be to proceed from a pretended intellectual intuition of hyper-physical relations, or from a reason that perceives the transcendent, or from an absolute self-thinking reason; for all this is not proceeding from immediate communicable perceptions, and therefore, even at the beginning, the reader never knows whether he follows his author, or whether he is far from him.

§ 6. The discourse with some one else about things is to our own earnest meditations and inward contemplation of them as a piece of machinery to a living organism. For only in the last is everything as cut from one piece, or as played in one key; therefore can it attain full clearness, distinctness, and true connexion, even unity; with the other, on the contrary, there will be put together heterogeneous pieces of very different origin, and a certain unity of motion be enforced, which often unexpectedly stops. For only one's self understands himself perfectly, others only half; for all one can get at is the community of the conceptions, but not the community which lies at the foundation of the intuitive comprehension of them. Deep philosophical thoughts will therefore perhaps never be brought to light, by way of community of thought, in the dialogue. However, this will be very advantageous as a previous exercise to start the problems, or to ventilate them, and afterwards for the examination, control and criticism of the solutions offered. In this sense, also, the dialogues of Plato are composed, in consequence of which there proceeded from his school the second and third academy with an increasing skeptical tendency. As a mode of communicating philosophical thought, the written dialogue will answer the purpose only where the object permits two or more quite different or even opposed views, the decision between which shall be either left to the reader, or which, taken together, shall serve as a supplement to each other for the complete and right understanding of the matter: to the first case also belongs the refutation of raised objections. The dialogistic form chosen in regard to this must then become truly dramatic for the reason that the difference of opinions is rendered prominent and worked out fundamentally: there must be really two who are speaking. Without this aim it is but an idle play, and this it is generally.

§ 7. Neither our knowledge nor our insight will ever be much increased by comparing and discussing that which is spoken by others; for that is only just as if one poured water from one vessel into another. Insight and knowledge can be really augmented only through one's own consideration of things themselves; for this alone is the ever-near and living spring. It therefore is very curious to see how those who

pretend to be philosophers are always occupied in the first way and seem not at all to know the other one; how they are always occupied by what this one has said, and what that one might have meant; so that they, as it were, always turn up old vessels anew to see whether there might not have remained in them a little drop, while the living spring flows neglected at their feet. There is nothing that betrays their incapacity more, or so plainly gives the lie to their assumed air of importance, thoughtfulness, and originality.

§ 8. Those who hope to become philosophers by studying the history of philosophy, may rather learn from it that philosophers, just as poets, are only born, and that more seldom.

§ 9. A curious and unworthy definition of philosophy, but which is given by Kant, is this, that it is a science of mere ideas, while the whole character of the ideas is nothing but what is put into them after it has been borrowed and begged of the intuitive perception, which is the real and inexhaustible spring of all cognition. A true philosophy, therefore, cannot be spun out from mere abstract ideas, but it must be founded on internal as well as external observation and experience. Neither will anything extraordinary ever be accomplished in philosophy by attempting the combination of ideas, as it has been carried out so very often by the sophists of our times, that is, by Fichte and Schelling, but most repugnantly by Hegel, besides also, in morals, by Schleiermacher. Philosophy as well as art and poetry must have its source in the intuitive apprehension of the world; moreover, it must not proceed in too cold blood, though the head has so much necessity for keeping cool; so that if at last the whole man, with heart and head, comes to action, he may be moved throughout. Philosophy is no algebraic example. Vauvenargue rather is right when he says, "Great thoughts come from the heart."

§ 10. Considered in general, the philosophy of all times may be conceived as a pendulum swinging to and fro between rationalism and illuminism; that is, between the use of the objective and that of the subjective sources of cognition. Rationalism, originally appointed to serve the will alone, and which therefore is directed outward, first appears as dogmatism, as which it is altogether objective. Then it

changes into skepticism, in consequence of which it becomes at last criticism, which undertakes to settle the dispute by taking into consideration the subject; that is, it becomes transcendental philosophy. By this I understand every philosophy which proceeds from the principle that its nearest and immediate objects are not things, but only the human consciousness of them, which therefore must never be left out of account. The French, not very appropriately, call this "*la méthode psychologique*" in opposition to "*la méthode logique*," whereby they understand that philosophy which naturally proceeds from any objects or objectively considered conceptions—that is, dogmatism. Arrived at this point, rationalism recognizes that its organon only conceives the phenomenon, but does not arrive at the last, intrinsic, and essential essence of things.

In all its phases, but nowhere more than just here, illuminism makes its appearance in opposition to it, and this essentially directed inward, has as its organon internal illumination, intellectual intuition, higher consciousness, immediately perceiving reason, consciousness of God, unification, etc., and it disregards rationalism as the "light of Nature." If, now, it assumes as its foundation a religion, it becomes mysticism. Its chief deficiency is that its cognitions are not communicable, partly because for the inner perception there is no criterion of the identity of the object of different subjects, partly because such a conception ought to be communicated by means of the language; but this, originated in behalf of the conception of the intellect which is directed outwardly by means of abstractions from it, is altogether unfit to express those fundamentally different internal conditions which are the matter of illuminism. This, therefore, had to form for itself a language of its own; but this again, on account of the first reason, was not possible. Now, as this cognition is not communicable, it also is indemonstrable; whereupon rationalism, at the hand of skepticism, enters again the field. Illuminism is already to be detected in some parts of Plato; but it more decidedly appears in the philosophy of the New-Platonists, of the gnostics, of Dionysius Areopagita, as well as of Scotus Erigena; again, with the Mohamedans, as the doctrine of *Sufi;* in India it prevails in the Vedanta and Mimansa; but most decidedly

belong to it Jacob Böhme and all the Christian mystics. It always appears when naturalism has run through a course without reaching its aim: so it appeared in Tauler and the author of the German theology, and others, towards the end of the scholastic philosophy, as its antithesis, as mysticism; and likewise in modern times, as opposed to the philosophy of Kant, in Jacobi and Schelling; also in the last period of Fichte.—However, philosophy should be communicable cognition, therefore it must be rationalism. Consequently, I have in mine, at the end, it is true, pointed out the domain of illuminism as something existing, but have been very cautious not to enter it even in the least; in return, I also did not attempt to give the final explanations of the existence of the world, but only went so far as it is possible to go, on the objective, rational mode. As to the illuminism, I left its space free, where it, in its own manner, may find the solution of all problems without the possibility of crossing my path, or the opportunity of ever disputing with me.

However, there may often enough lie a hidden illuminism at the foundation of rationalism, towards which then the philosopher looks as to a concealed compass, while he avowedly directs his way only by the stars—that is, the external and clearly presented objects—and ostensibly takes only these into account. This is admissible, because he does not undertake to communicate the uncommunicable cognition, but his communication remains plainly objective and rational. This may have been the case with Plato, Spinoza, Malebranche, and many others: it does not concern anybody; for these are the secrets of their hearts. But, on the contrary, the loud appeal to intellectual intuition, and the bold relation of its contents, together with the pretension of objective sufficiency of them, as with Fichte and Schelling, is insolent and rejectable.

Illuminism, however, in itself is a natural attempt to explore the truth, and so far it may be justified. For the intellect, which is directed outward as a mere organon for the aims of the will, and consequently only something secondary, is but a part of our whole essence: it belongs to the phenomenon, and its cognition corresponds only to this because it exists only in its behalf. What, therefore, can be more natural,

after it failed with the objective-conceiving intellect, but to bring into action our whole remaining nature, which is also but a thing in itself — that is, which belongs to the true essence of the world, and consequently must bear in itself in some way or other the solution of all problems, and to seek help by it;—as did the ancient Germans, who, after they had lost everything, at last staked their own persons. The only right and valid objective way to accomplish this, is to conceive the empirical fact of a will which makes itself known in our interior — nay, even forms the only essence of it — and to apply it to the explanation of the objective external cognition, as I consequently have done. But, for the reasons explained above, the mode of illuminism does not lead to the end.

§ 11. Mere craftiness enables one, perhaps, to be a skeptic, but not to be a philosopher. However, skepticism is to philosophy what the opposition is in parliament, and is just as salutary, even necessary. Everywhere it depends upon the fact that philosophy can present no evidence such as mathematics possesses, and man is equally devoid of the instinct of animals which insures success from the start. Therefore, against every system skepticism can lay itself in the scale; but its weight at last will become so insignificant against the other that it will do it no more harm than does the fact that the arithmetical quadrature of the circle is but approximative, invalidate its usefulness. That which one knows is of double importance, if at the same time one confesses himself not to know what he does not know. By this means the former is secured against the suspicion to which it is exposed, if one pretends to know what he does not know, as, for instance, did the partisans of Schelling.

§ 12. Certain propositions which one accepts as true without examination, and of which he is so firmly convinced, that, even if he desired, he could not examine them earnestly, because he cannot at all doubt them, are called judgments of reason. This firm credit they obtained because they were incessantly dictated, and by that means instilled into him when he commenced to talk and to think; for which reason his habit of thinking them is just as old as the habit of thinking in general. Whence it comes that he is no longer able

to separate the two; they have grown into his brain. What is said here is so true, that it would be on the one hand superfluous and on the other hazardous to cite any examples.

§ 13. No opinion of the world, if derived from an objective, intuitive apprehension of things, and if consequentially carried through, can be entirely erroneous; but it is, when the worst comes to the worst, only defective: so, for instance, is perfect materialism, absolute idealism, and others. They are all true, but they are all at the same time true; consequently, their truth is only a relative one. Every such apprehension, viz., is only true from a particular standpoint, just as a picture represents a landscape from one point of view only. But if one rises above the standpoint of such a system, then he will perceive the relativity of its truth, i. e. its one-sidedness. Only the highest standpoint, overlooking everything, can give absolute truth. In consequence of this, it is true, for instance, if I regard myself as a mere transient product of nature, which, having originated in time, is destined to total destruction — as in the case of Koheleth; but at the same time it is true that everything which has ever been and ever will be is I, and there is nothing besides me. It is just as true, if I, after the manner of Anakreon, place the highest happiness in the enjoyment of the present; but at the same time it is true, if I conceive the wholesomeness of suffering, and the nugatoriness, yea, the perniciousness of all enjoyment, and conceive death as the aim of my existence.

The reason of all this is, that every view which can be logically carried out is nothing but an apprehension of nature transferred into ideas, and which on this account is a fixed, intuitive, and objective one; but nature—that is, the intuitive —never lies, nor contradicts itself, because its essence excludes anything of that kind. Wherever, therefore, there exists a contradiction or a lie, there are thoughts that have not originated from objective apprehension; as, for instance, in optimism. But an objective apprehension can, on the contrary, be incomplete and one-sided: then it deserves a supplement, not a refutation.

§ 14. Men are never tired of reproaching metaphysics with its little progress, in the face of the great strides of physical science. Even Voltaire exclaims: "*O métaphysique! nous*

*sommes aussi avancés que du temps des premièrs Druïdes.*" But what other science besides this has always had a continual restraint, at all times an antagonist *ex officio*, an appointed fiscal accuser, a king's champion in full armor, who encountered the defenceless and unarmed? Never will it be able to show its real powers, to take its gigantic steps, so long as one demands of it under threats its subordination to the dogmas which are calculated for the very small capacity of the great multitude. First they bind our arms, and then they mock us, so that we cannot accomplish anything. The religions have taken possession of the metaphysical talent of men, partly by laming it through a premature inculcation of its dogmas, partly by forbidding and prohibiting all free and unprejudiced expressions in such a way that to man, free inquiry into the most important and most interesting matters about his existence is partly forbidden, partly directly or indirectly is hindered, partly is subjectively made impossible to him by that lameness, and in such a manner that the most sublime of his talents is bound in fetters.

§ 15. To make ourselves tolerant towards views opposed to ours, and patient in contradiction, nothing perhaps is more efficacious than the recollection of how often we ourselves, on the very same subject, have successfully cherished quite contrary opinions, and have changed these again and again even in a very short time; how we have rejected, and accepted again, sometimes the one opinion, sometimes the opposite, as the subject presented itself now in this, then in another light. Likewise to produce any effect in our contradiction of the opinion of others, nothing is more efficacious than the phrase: "the same I formerly used to believe, too; but," etc.

§ 16. An erroneous doctrine, whether it proceed from an erroneous view or from a bad intention, is always destined only for a special occasion, — truth alone, for all time, — though it may be mistaken or stifled for awhile. Yet as soon as there comes a little light from within, or a little air from without, somebody will appear to proclaim or to defend it. Because it did not proceed from the design of any party, every eminent genius will be its advocate. For it resembles the magnet, which always and everywhere points towards an absolute fixed point of the world; the erroneous doctrine, on

the contrary, resembles a statue which points with its hand towards another statue, separated from which it has lost all signification.

§ 17. What is most opposed to the discovery of truth is not the false appearance proceeding from things and leading to error; nor immediately weakness of mind; but it is the preconceived opinion, the prejudice, which as a spurious *a priori* opposes itself to the truth, and resembles a contrary wind which drives back the ship from the direction in which alone the land is situated, in such a manner that rudder and sails are vainly active.

§ 18. The verse of Goethe in Faust,

> "What thou hast inherited from thy fathers,
> Acquire it to possess it,"

I comment upon as follows: To find, what thinkers have found already, by our own means, independent of them and before knowing of their discovery, is of great importance and advantage. For what one thinks himself he will understand more profoundly than what he has learned, and, if afterwards he finds it with those leaders, he will obtain unexpectedly a strong and truth-testifying confirmation by other acknowledged authority, whereby he then will gain confidence and constancy to defend it against every contradiction. But, on the contrary, if one has found it first in books and afterwards also got at the same result by his own meditation, then he never certainly knows whether he thought and judged this himself, or merely repeated and experienced what he had found in books. But this makes a great difference in regard to the certainty of the matter. For in the last case, it may be, that he has followed the errors of his predecessors; just as water easily takes the course marked out for it. If two count, each one for himself, and get the same result, then this will be a sure one, but not if the counting of the one has been only reviewed by the other.

§ 19. It is a consequence of the constitution of our intellect which is derived from the will, that we cannot forbear to comprehend the world either as end and aim, or as means. The first only would denote that its existence is justified through its being, consequently is by all means to be preferred to its non-existence. But the perception that it is only a field of

battle for suffering and dying beings, does not permit this opinion. However, the infinitude of time already past, by virtue of which every attainable aim could have been reached long since, does not permit us to conceive it as means. From this it follows that every application to the totality of things, or the world, of the supposition natural to our intellect, is a transcendental one; that is, such a one as perhaps is permitted in the world but not *of* the world: which is to be explained from the fact that it originated from the nature of our intellect, which, as I have shown, originated in the service of an individual will — that is, for the attainment of its objects — and therefore is calculated exclusively for aims and means, consequently does not understand nor conceive anything else.

§ 20. If one looks about him, where is presented to us the immeasurability and the innumerableness of beings, his insignificance is made apparent, and man as a mere individual seems to vanish. Overpowered by this preponderance of bulk and number, one imagines that the philosophy which is directed to the without — that is, objective philosophy — can only be on the right track: the most ancient Greek philosophers do not even think of doubting this. But if, on the contrary, one looks within, then he finds, first of all, that every individual sympathizes directly with himself, even takes more interest in himself than in all the rest taken together; and it follows from this that he understands only himself directly, but everything else only indirectly. If we add to this that conscious and cognitive beings absolutely only can be imagined as individuals, and that unconscious ones only have a half-way and merely indirect existence, then every proper and true existence is found in individuals. If, lastly, we even recollect that the object is conditioned by the subject, that consequently those immeasurable objects external to us have their existence only in the consciousness of cognizing beings, consequently are bound to the existence of individuals who are its bearers, and bound to it so decidedly that in this respect they even can be regarded as a mere endowment, an element of the constantly individual consciousness; — if we, I say, take all this into consideration, then we come to the opinion that only that philosophy is the right one which

is directed towards the internal, which proceeds from the subject as the directly given — that is, the philosophy of modern times since Descartes — and that consequently the ancients overlooked the main point. But the full conviction of this we shall attain only if we, deeply reflecting upon ourselves, bring to our consciousness the feeling of originality which is in every cognizing being. Yea, even more than this: Everybody, even the most insignificant person, finds in his simple self-consciousness himself as the most real being, and necessarily discerns in himself the true centre of the world, yea, the primitive, original source of all reality. And does this original consciousness lie? The strongest expression of it is in the following words of the Upanishad: *hæ omnes creaturæ in totum ego sum, et præter me ens aliud non est, et omnia ego creata feci* — which then, of course, is the transition to illuminism, perhaps even to mysticism. This, therefore, is the result of the reflection which is directed towards the internal; while the one directed to the external gives us to perceive as the aim of our existence a little heap of ashes.*

On the classification of philosophy, which is of especial importance with regard to the teaching of it, the following would, from my point of view, be valid.

Philosophy, indeed, has as its object experience; but not, like the rest of the sciences, this or that particular experience, but merely experience itself in general, according to its possibility, its domain, its essential contents, its internal and external elements, its form and matter. I have fully shown in the second volume of my principal work that philosophy undoubtedly has some empirical foundations, and cannot be spun out from mere abstract notions. From this, it further follows that the first thing which it has to take into consideration must be the medium in which in general experience presents itself, besides its form and nature. This medium is representation, cognition—that is, intellect. Therefore, every philosophy has to commence with the examination of the

* *Finite* and *infinite* are ideas which have a signification only in reference to space and time, as both these are infinite, that is, endless as well as divisible *ad infinitum*. If we apply these two conceptions to other things, then they must be such as, filling space and time, partake through these of their properties. From this it may be judged how great is the abuse which some boasters and would-be philosophers have carried on with those conceptions in this century.

cognitive faculty, of its forms and laws as well as its validity and limits. Such an inquiry, therefore, will be *philosophia prima.* It will be divided into the consideration of the primary, that is, the intuitive conceptions, which partly may be called *Dianoiology*, or the Science of the Understanding, and into the consideration of the secondary, that is, the abstract notions, besides the legality of its procedure, that is, logic, or the doctrine of reason. This general part contains, or rather supplies the space of what formerly was called Ontology, and exhibited as the doctrine of the most general and most essential properties of things as such, since they took as properties of things abstractly what belongs to them only in consequence of the form and nature of our faculty of representation, as in consequence of this, all beings which are to be comprehended must represent themselves conformably to this, in consequence of which they then obtain certain properties common to all of them. This can be compared to the circumstance that we attribute the color of a glass through which we look to all the objects seen through it.

Philosophy more strictly taken, and following such inquiries, will then be metaphysics; because it not only teaches of the existing, of nature, orders and considers it in this connection, but also conceives it as a given but somehow or other conditioned phenomenon, in which there represents itself a being different from it, which consequently would be the thing in itself. With this now it endeavors to become better acquainted: the means to this are partly the joining together of the external with the internal experience, partly the obtaining of an understanding of the whole phenomenon by means of the finding of its sense and its connection — which may be compared to the reciting of the hitherto enigmatic characters of an unknown inscription. In this way it proceeds from the phenomenon to that which manifests itself, i. e. to what is behind it; hence *τὰ μετὰ τὰ φυσικά.* In consequence of this, it is divided into three parts:

Metaphysics of Nature;
Metaphysics of Æsthetics;
Metaphysics of Ethics.

But the derivation of this classification presupposes already metaphysics. For this shows the thing in itself, the internal

and ultimate essence of the phenomenon, in our *will;* consequently, after the consideration of it as it represents itself in external nature, its quite different and immediate internal manifestation will be examined, from which proceeds the metaphysics of ethics; but, before this, will be taken into consideration the most perfect and most sublime comprehension of its external or objective appearance, which is the metaphysics of æsthetics.

There is no such thing as a rational psychology; because, as Kant proved, the soul is a transcendent, and, as such, an undemonstrated and unjustified hypostasis; in consequence of which the antithesis of spirit and nature is left to the Philistines and the Hegelians. The essence of man in itself can be understood only in connection with the essence-in-itself of all things, that is, the world. Therefore Plato, in the Phædrus, lets Socrates, in the negative sense, ask the question; "Do you suppose that the nature of the soul can be comprehended apart from that of the world?" Microcosm and Macrocosm reciprocally explain each other, whereby it follows that they are essentially the same. These considerations of man's internal being penetrate and fill up metaphysics in all its parts, and can therefore not appear again separated as psychology. On the contrary, anthropology may be treated as an empirical science, but it is partly anatomy and physiology, partly mere empirical psychology, that is, a knowledge of the moral and intellectual utterances and peculiarities of mankind derived from observation. But the most important part of it, as an empirical matter, will necessarily be anticipated by the three parts of metaphysics, and be used by them. What then remains demands a subtle observation and an ingenious comprehension, nay, even contemplation from a somewhat elevated standpoint — I mean from that of some superiority — and is therefore capable of being enjoyed only in the writings of eminent men of genius, e. g. Theophrastus, Montaigne, La Rochefoucauld, La Bruyère, Helvetius, Chamfort, Addison, Shaftsbury, Shenstone, Lichtenberg, and others; but is not to be looked for nor to be borne in the compendiums of professors of philosophy destitute of genius, and therefore opposed to all genius.

# NEW SYSTEM OF NATURE

## And of the Communication of Substances, as well as of the Union of Soul and Body.

Written in 1695, and translated from the French of G W. LEIBNITZ, by A. E. KROEGER.

(This article gives a clue to the doctrine of the Monadology.)

1. It is several years ago that I conceived this system and communicated about it with learned men, particularly with one of the great theologians and philosophers of our time, who, having learned some of my ideas from a lady of the highest quality, had found them quite paradoxical. But having received my explanation he retracted his criticism in the most generous and pleasant manner in the world; and having approved a part of my propositions, he checked all censure of the others concerning which he did not yet agree with me. Since that time I have continued my meditations as occasion permitted, so that I might give to the public only such opinions as had been well examined; and meanwhile I have also tried to meet the objections raised against my essays on the Dynamics, which have some connection with this subject. But at last, many persons desiring to see my opinions more cleared up, I have hazarded the publication of these meditations, although they are in nowise popular, nor proper to be relished by every kind of minds. I have done so chiefly in order to profit by the judgment of those who are learned in these matters, since it would be too embarrassing to hunt up individually all who might be disposed to instruct me; and I shall always be glad to receive such instructions, provided they exhibit a love of truth rather than passionate prejudice in favor of cherished opinions.

2. Though I am one of those who have long labored in mathematics, I have not ceased from my youth to meditate on philosophy, since it appeared to me always that there must be some means to establish something permanent in it by clear demonstrations. I had penetrated quite far already in the land of the Scholastics, when mathematics and modern writers caused me to leave it at a time when I was yet quite young. Their nice ways of explaining nature mechanically charmed me, and I justly despised the method of those who simply employ forms or faculties by which one learns

nothing. But since then, in trying to get at the bottom of even the fundamental principles of mechanics, in order to render an account of the laws of nature that experience has taught us, I began to perceive that the consideration of an *extended mass* alone would not be sufficient, but that it was necessary to employ moreover the conception of a *force*, a conception which is quite intelligible, though it belongs to metaphysics. Thus it seemed to me that the opinion of those who degrade the beasts into pure machines, though it seems possible enough, is without any likelihood and even against the order of things.

3. At first, when I was not yet free from the yoke of Aristotle, I had held to the void and atoms, for this best fills the imagination; but having found my way back, and after many meditations, I perceived that it is impossible to find *the principles of a true unity* in matter alone, or in that which is only passive, because everything here is simply a collection or mass of parts *ad infinitum*. But since the multiplicity cannot have its reality in aught but *true unities* that originate otherwise, and are quite other things than the points of which it is certain that the continuous could not be composed, I was compelled, in order to find these *real unities*, to have recourse to a formal atom, since a material being could not be at the same time material and completely indivisible, or, in other words, endowed with a true unity. Hence I had to recall and, as it were, reestablish the *substantial forms* so much decried at the present day, but in a manner which rendered them intelligible, and which separated the proper use to be made of them from the abuse that has been made of them. I discovered then that their nature consists in force, and that from it there arises something analagous to sensation and desire (*appetit*), and that hence we must conceive them similarly to the conception which we have of *souls*. But since the conception of soul must not be used to account for the detail of the economy of the animal *body*, I considered that I must also not use these forms to explain the particular problems of nature, though they are necessary to establish true general principles. Aristotle calls them first entelechies. I call them, perhaps more intelligibly, *primitive forces*,* that

* Afterwards Leibnitz called them monads.

contain not only the *act*, or the complement of possibility, but moreover an original *activity*.

4. I saw that these forms and these souls must be indivisible, just as our spirit is; and, indeed, I recollected that Saint Thomas held this view in regard to the souls of animals. But this truth renewed great difficulties concerning the origin and duration of souls and forms. For every substance that has a true unity, as it cannot have either its beginning or its end otherwise than through a miracle, it follows that they could begin only by creation and end only by annihilation. Thus I was obliged to recognize that, excepting the souls that God wants expressly to create hereafter, the constitutive forms of substances must have been created together with the world, and that they subsist forever. Thus some scholastics, like Albert the Great and Jean Bacon, had a glimpse of the truth regarding their origin. And the matter ought not to appear extraordinary, since it does not attribute to the forms anything but that permanency which the followers of Gassendi accord to their atoms.

5. I thought, however, that it would not do to mix indifferently with these forms the spirits and the rational souls that are of a superior order and have incomparably more perfection than the forms of matter, being rather like small gods in comparison, made in the likeness of God and having in them some rays of the light of the divinity. This is why God governs the spirits as a prince governs his subjects, or even as a father takes care of his children; whereas of the other substances he disposes as an engineer manages his machines. Thus the spirits have particular laws which place them above the changes of matter; and it may be said that everything else is made only for their sake, these very changes being regulated to correspond with the felicity of the good and the punishment of the bad.

6. Nevertheless — to return to the ordinary forms or the *material souls*—this permanency, which we must attribute to them in place of that permanency which has been attributed to the atoms, might lead to a doubt as to whether they do not pass from one body to another body, which would be a *metempsychosis* somewhat like the transmission of movement and of species which some philosophers have believed in.

But this idea is very far from the nature of things. There is no such transmission; and it is here that the *transformations* of Messrs. Swammerdam, Malpighi, and Leewenhock, who belong to the most excellent observers of our times, have come to my aid, and have made it more easy for me to admit that the animal, and indeed every other organized substance, do not begin to exist when we believe they do, and that their apparent generation is nothing but a sort of augmentation. I have observed that the author of the *Recherche de la Vérité*, Mr. Regis, Mr. Hartsoeker, and other able men, have not been far from this opinion.

7. Still there remained the great question what these souls or forms might become after the death of the animal, or by the destruction of the individual of the organized substance; and it is this which causes most embarrassment, since it appears not at all reasonable that the souls should remain useless in a chaos of confused matter. This has led me finally to consider that there is only one sensible conclusion to arrive at, namely, that of the conservation not only of the soul, but moreover of the animal itself and its whole organic machinery, no matter whether the destruction of its grosser parts may have reduced it to a littleness, which, however, escapes our perception no more than it did before the animal was born. Thus no person is well able to point out the true time of death, which for a long time may pass for a simple suspension of known actions, and in point of fact is never anything else in the lower animals; witness the *resuscitations* of flies that were drowned and afterwards buried in pulverized chalk, and many singular examples that illustrate clearly enough that there would be may other resuscitations, and of far greater extent, if men were in a condition to mend the machine. It seems, indeed, as if it must have been something like this which the great Democritus has spoken of, however much of an Atomist he was, and although Pliny ridicules him on that account.

It is, therefore, natural that the animal having been always alive and organized, as persons of great penetration now begin to recognize, must also remain so always. And since there is no first birth or entirely new generation of an animal, it follows that there can also be no final extinction or complete

death — speaking with metaphysical strictness; — and that hence, in place of the transmigration of souls, there occurs only a transformation of the same animal according to the way in which the organs are differently folded, or more or less developed.

8. Nevertheless the rational souls follow far higher laws, and are exempt from all that which could make them lose the quality of citizens of the empire of spirits; God having arranged this so well that all the changes of matter could not make them lose the moral qualities of their personality. Indeed it may be said that everything tends to the perfection not only of the universe in general, but also of those creatures in particular which are destined to such a degree of happiness that the universe finds itself interested therein in virtue of the divine goodness, which communicates itself to each one as much as the supreme wisdom may permit.

9. Concerning the ordinary course of the animals and other corporeal substances, of which men have hitherto believed the entire extinction, and the changes whereof depend more upon mechanical rule than moral laws, I observe with pleasure that the ancient author of the book *On Diet*, which has been attributed to Hippocrates, had some notion of the truth when he stated in express terms that the animals neither are born nor die, and that those things which have been held to begin and to perish simply appear and disappear. This was also the opinion of Parmenides and Melissus, as Aristotle reports: for these ancients were more thorough than we believe.

10. I am quite well disposed to render justice to the moderns, nevertheless I find that they have carried their reform too far; amongst other things, in confounding natural with artificial things, which they did because they had not sufficiently high ideas of the majesty of nature. They conceived that the difference between the works of nature and our own works was only one of degree. This has led very recently a very able man, the author of *Conversations on the Plurality of Worlds*, to say that in regarding nature more closely we find her less admirable than we had believed, and indeed only like the shop of a workman. But I believe that this does not give a sufficiently worthy idea of nature, and it is only my system which teaches men to know at last the true and immense dis-

tance between the smallest productions and mechanisms of the divine wisdom and the greatest works of art of a limited intelligence; this difference being not of degree, but one of kind. It should therefore be known that the machines of nature have a truly infinite number of organs, and are so well provided and proof against all accidents that they cannot be annihilated. A natural machine remains always machine in its smallest parts, and, what is more, remains always the same machine it has been, becoming transformed only by the different unfoldings it receives, being now extended and then again compressed and as it were concentrated until we believe it to have become lost.

11. Furthermore, by means of the soul or the form there exists in them a true unity, which corresponds to that which we call Ego in us. But this could not be if they were works of art, or if they were simple masses of matter, however highly organized, in which case they could be considered only as an army, or a troop, or a lake full of fishes, or a watch composed of springs and wheels. But if there were no true or substantial unities in them, there would be nothing substantial or real in the agglomeration. It was this which compelled Mr. Cordemoi to leave Descartes and accept the doctrine of atoms of Democritus, in order to find in them a true unity. But material atoms are contrary to reason, besides being composed of parts; since the invincible attachment of the one part for the other — if it could be rationally conceived or suffered — would not destroy their diversity. Thus there are only *substantial atoms* — that is, real and absolute unities — destitute of parts, and the sources of actions as well as the first absolute principles of the composition of things and the last elements of the analysis of substances. One might call them *metaphysical points.* They have *something vital* in them and a sort of *perception*, and the *mathematical points* are their *points of view* to express the universe.

But when the corporeal substances are compressed, all their organs together make only one physical point, in our opinion. Thus the physical points are only in appearance indivisible; the mathematical points are exact, but they are mere modalities; only the metaphysical or substantial points — constituted by the forms or souls — are exact and real, and

without them there would be nothing real, since without true unities there would be no multiplicity.

12. After having established these things, I thought I had entered port; but when I set to meditating on the union of soul and body, I was, as it were, cast back upon the open sea. For I did not find any means to explain how the body could exercise any influence upon the soul, and *vice versa;* nor how one substance could communicate with another created substance. Mr. Descartes had left this matter untouched, so far as one can glean from his writings; but his disciples, seeing that the common opinion on this subject was inconceivable, supposed that we felt the qualities of bodies because God caused thoughts to arise in our souls on the occasion of the movements of matter, and that when our souls in their turn moved matter it was God who moved the matter for them. Finally, since the communication of movements seemed to them impossible, they believed that God gave movement to the one body on the occasion of the movement of another body. It was this they called the *System of Occasional Causes*, a system that was put quite in vogue by the neat reflections of the author of *Researches after Truth.*

13. It must be confessed that these Cartesians have well grasped the difficulty in their way, by stating what cannot be; but it does not appear that they have removed the difficulty by explaining that which in fact occurs. It is quite true that there is no real influence exercised by one created substance on another one (speaking with metaphysical strictness), and that all things with all their realities are continually produced by the power of God; but in order to solve these problems it is not enough to employ a general cause and to call to aid what is called a *Deus ex machina.* For to do this without giving any other explanation, which might be derived from the order of secondary causes, is simply to have recourse to miracles. But in philosophy we should endeavor to give reasons in explaining how things do occur by divine wisdom in conformity with the conception of the subject under consideration.

14. Being, therefore, obliged to agree that it is not possible that the soul, or any other true substance, can receive anything from without, except it be by divine omnipotence, I was

insensibly led to an idea which surprised me, but which seemed inevitable, and which has, in fact, very great advantages and very considerable beauties. This was, that we must then come to the conclusion that God created the soul, or every other real unity, in such a manner as to have everything arise in it from its own proper nature with a perfect *spontaneity* in relation to itself, and yet at the same time with perfect *conformity* to the outside things. That thus our internal perceptions—that is, those in the soul itself, and not in the brain or in the subtle parts of the body—being nothing but phenomena related to external things or true appearances, and like well regulated dreams—that these internal perceptions, therefore, in the soul itself, come to the soul through its own original constitution, that is to say, through that representative character (capable of expressing outside things by relation to its organs) which was given to it at its creation and which constitutes its individual character. Thus it is that each of these substances — each representing precisely the whole universe in its own way and according to a certain point of view, and the perceptions or expressions of the external things reaching the soul in this point by virtue of its own laws, as of a world in itself, and as if nothing existed but God and itself (to use the mode of expression of a certain person of elevated mind and whose sanctity is everywhere recognized)—must be in perfect accord with all others, whereby the same effect is produced as if they all communicated with each other by a transmission of species or of the qualities, as the vulgar philosophers imagine. Moreover, the organized mass, wherein the point of view of the soul exists, being expressed more nearly, and finding itself reciprocally ready to act of itself according to the laws of the bodily machine in whatever moment the soul wills it,—neither one interfering with the laws of the other,—the intelligence and the blood have precisely those movements which are necessary to respond to the passions and perceptions of the soul. It is this mutual *rapport*, regulated in advance in each substance of the universe, which produces what we call their communication, and which alone constitutes the *union of body and soul*. It is thus that we can understand how the soul has its seat in the body by an immediate presence; a presence that

could not be greater, since the soul is there just as the unity is in the result of the unities, which is the multiplicity.

15. This hypothesis is very possible. For why might not God have given at first to the substance a nature or internal force which produced in it perfect order—just as if it were a *spiritual or formal automaton, but free* in that substance which partakes of reason—all that which might happen to it, that is, all those appearances or expressions which it ever might have, and this without the aid of any creature;—all the more since the nature of the substance demands necessarily and embraces essentially a progress or change, without which it would not have the power to act? The nature of the soul being representative of the universe in a very exact manner, though more or less distinct, the sequence of the representations which the soul produces will naturally correspond with the sequence of the changes in the universe itself; just as, on the other hand, the body has been accommodated to the soul for those occurrences wherein the soul is conceived as acting outside of itself, which is all the more reasonable since the bodies are made only for those souls that are capable of entering into communion with God and of celebrating his glory. Thus as soon as one sees the possibility of this *hypothesis* of accords, or harmonies, one sees also that it is the most reasonable one, giving a marvellous idea of the harmony of the universe and of the perfection of God's works.

16. There is moreover this great advantage, that, instead of saying we are free merely in appearance and in a manner sufficient for practical purposes, as many intelligent persons have held, we ought rather to say that we are determined only in appearance, and that (speaking in metaphysical strictness) we are perfectly independent of the influence of all other creatures. This puts into a wonderfully clear light, morever, the immortality of our soul and the perennial uniform conservation of our individuality, always well regulated by its own nature and guarded against all outside accidents, no matter how much it looks to the contrary. Never did a system establish our dignity with greater evidence. Every spirit being a world in itself—sufficient for itself, independent of all other creatures, enveloping the infinite, and expressing the universe—is as durable, as subsistent, and as absolute,

as the very universe of all creatures. Hence we must hold, that we should always keep in mind the most proper manner of contributing to the perfection of the society of all the spirits who realize their moral unity in the city of God. We find here also a new proof of the existence of God, a proof of surprising clearness. For this perfect accord of so many substances that have no communication amongst themselves, can result only from a common cause.

17. Besides these advantages which recommend this hypothesis, we may say that it is more than an hypothesis, since it seems scarcely possible to explain things in another way intelligibly, and since many great difficulties that have hitherto puzzled the minds of men seem to disappear when this theory has been well comprehended. The usage of ordinary speech is not interfered with particularly by this. For we can well say that the substance, the disposition whereof gives a reason for the change in an intelligible manner — in such a way that we can judge that all the others have been accommodated to it from the beginning according to the decrees of God — is that substance which we must conceive as one that acts upon others. Thus the action of one substance upon the other is not an emission or the transplantation of an entity, as the vulgar believe, and cannot be reasonably taken for anything else than I have described. It is true that we can well conceive in matter the emission and reception of parts, by which we have reasons to explain mechanically all the phenomena of Physics; but since the mass of matter is not a substance, it is clear that the action as related to the substance can be only in the way I have said.

18. These considerations, however metaphysical they may appear, have still further a marvellous application to physical sciences by establishing the law of movement as my *Dynamics* may show. For we may say that in the collision of bodies each suffers only by its own repulsion,—the cause of the movement that is already in it,—and so far as the absolute motion is concerned nothing can determine it mathematically since everything terminates in *rapports*. Hence there is always a perfect equivalence of hypotheses, as in Astronomy. Thus, whatever number of bodies you take, it is perfectly arbitrary to assign rest or a specified degree or motion to whatever

body you may select; and no phenomena of straight, circular or composite motion can refute you. Still it is reasonable to attribute to bodies true motion in accordance with the supposition that we should account for phenomena in the most intelligible manner, this denomination being conformable to that conception of action which we have just endeavored to establish.

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## GOETHE'S STORY OF THE SNAKE.

Translated from the German of CARL ROSENKRANZ, by ANNA C. BRACKETT.

[The German word *Mährchen* can be properly rendered in English neither by Fable nor Legend. *Fairy-Story* would most nearly express its meaning, but this name does not seem applicable here. The introductory remarks of our author must be understood, however, as referring to that class of fictions termed Fairy-Stories in English, though in many of them no fairies, properly speaking, appear. I have translated it simply Story.—*Tr.*]

At the beginning it should be said that such stories, as a class, belong to epic poetry, and among nations that possess an epic poem, this may be only an organized compilation of them; as among the Greeks, for instance, the Odyssey embodies the fabulous literature of that people. Among those who have no proper mythical religion they fill the place of the myth, just as among those who possess no real epic poetry they answer its purpose. The stories of the gods of Greenland and Kamschatka belong to this class, and among the Westphalians and the Lithuanians we find them even now instead of traditional epics. They are the epics of childhood. As to their execution, however fantastic they may be, the play of the fancy must be based upon a certain amount of truth to nature, and this necessity has been perceived and acted upon by Goethe in this case. The river, the cavern, the veins of metal, the will-o'-the-wisps, the snake, the changes in the light at different times of the day,—all these are painted with the purest, most objective truth to nature. It is this firm basis which persuades us into accepting without objection the numerous transformations, and in this foundation Goethe has an infinitely strong support of the purest

epic character. If we compare with his clear representations the imitations in romance which followed him, we shall at once recognize the difference between them in this particular, for many of their writers seem to think that fiction consists in a misrepresentation and distortion of nature.

But with this truth to nature, which suits so well the sensuous simplicity of a child's mind, must be joined the childlike traits of fancy, of holding fast to striking details and of ignoring the limits of the understanding. This element is also excellently seen in the story under consideration, though we find the story more in earnest than would be one intended for children. The scattering from the torches of the will-o'-the-wisps of sparks, which jingle on the ground as golden coins, is one of these inimitable touches, also the changing of Mops from a pet dog into a precious stone; the three maidens who serve the fair Lily and who bring her, the first an ivory stool, the second a harp, while the third holds a sunshade over her; the paying of the ferryman, in lieu of gold, with three artichokes, three onions, and three cabbages,—these and similar most exact descriptions of minutiæ correspond happily to the realism of childlike fancies. The same effect is produced by the disregard of probability and law; as, for example, in the subterranean temple, where the statues of the four kings stand in niches, we are told that the old man with the lamp sinks away towards the west, the snake towards the east, and yet both of them immediately appear as present. And it is as if to satisfy the curiosity of children, when the ferryman's hut, which we had perceived just at the beginning, is not forgotten at the end, but is made into an inner temple of the greater one by being changed into a kind of altar. It is difficult to use this childlike element without allowing it to become absurd or childish; and childishness is a prominent weakness of the new race of story-tellers who are continually flooding Germany with their tame and weak compositions, thus furnishing the worst possible food for the fancy and mind of children.

We have a right to demand of the author of such a story that it shall be more than an aphoristic aggregate of shadow-pictures in kaleidoscopic confusion; that it shall be a work carried out with an Idea. And this idea should not be a mere

scaffolding of conceptions, around which, from without, the flower-wreath of fancy is wound, for then the story becomes only an allegory, and in an allegory the aim is forced disagreeably upon one's attention. It should be thoughtful; it should, as Goethe says, remind us of all and of nothing; or, as Schiller expresses it, it should be the symbol of all. We should be able to interpret for ourselves its forms, yet there should always remain something inexplicable and mysterious. Goethe has succeeded perfectly in this particular. A prophetic voice rings throughout the whole in the cry, "The time is at hand!" The enigmatical questions which the poet has introduced belong to the national German spirit, which always likes to sound, by their means, guest or host, to find out of what spirit he is, and whether the stranger is worthy of further acquaintance. Thus we have here the questions: "What is nobler than gold?" "The light." "What is more refreshing than the light?" "Speech." And again: "What is the greatest secret?" and the right worthy answer, "The open secret." The open secret refers to regeneration, for all errors appear at the conclusion as blotted out, all ties renewed, all spirits inspired with fresh intelligence. But all this is represented as possible only in so far as the different powers combine for one and the same end. Isolated efforts avail not. Novalis unquestionably desired to represent somewhat the same thought at the end of the first part of his *Ofterdingen*, but evidently found it perplexing to do so. He allowed his world of shadows to become too dreamy, while in Goethe's story everything fits together; the boldness of the fantasy is relieved by the unity and simplicity of the representation, and the mysterious flexibility of the didactic elements lacks nowhere the sensuous clearness of objective coloring. I am often surprised that no one of the Dusseldorf artists has attempted to paint the different scenes of this story.

But what shall we say is its aim? If we consider that we find it related in a conversation of travellers who wish to banish politics from their words, we shall not be far wrong if we assume that the political element has taken refuge in the mask of the story and given to it its special meaning; and yet that it has, besides this, a quite free and universal signi-

fication, entirely independent of any relation to the events, and of many-sided value. The very thing which the travellers had agreed not to mention, projected itself into a dreamy vision, ventured out in the guise of a child's story into the company, and even established itself as a Totality, so that the conversation came to an end. May not the youthful king, who, despoiled of his throne, his sceptre, and his sword, forsaken, wanders around in his armor and purple cloak to seek the fair Lily, represent a prince who has lost his throne through the faults of his ancestors? As the complement of this wanderer we have Lily, who charms all by her beauty and blesses all by her song, but who is solitary, surrounded by a lovely garden, the trees of which however never bear flowers or fruit. Her glance benumbs all life, her touch kills. Thus she laments:

> "Afar from pleasures human, sweet and tender,
> The bride of sorrow, wait I day by day.
> Why mirrors not the stream the temple's splendor?
> Why springs the bridge not o'er the river's way?"

This Lily is *Innocence*, but innocence pure and simple, which, as a force opposed to all life as to that which has incurred some responsibility, paralyzes it. But it can also reanimate. Thus, when confronted with innocence, guilt becomes conscious of itself, but it does not rest here; it passes beyond the paralysis of this self-recognition, and springs to a new and better life through its union with innocence.

Between the subterranean temple, in which are the statues of the four kings, and the garden of the beautiful Lily, sweeps a river directly suggestive of the Rhine, on whose banks various races dwell, across which Germany and France watch each other, and over which as yet no strong stone bridge is arched. But this is a secondary consideration. The principal thing is the water, which at the same time separates and unites mankind. The ford across is guarded during the day by a giant, who is inactive himself, but whose shadow demands toll from all who come within its reach. Thus it takes from the old woman's basket, in which she brings in behalf of the will-o'-the-wisps three artichokes, three onions, and three cabbages, one of each. Why should we not see in this awkward giant a sym-

bol of the duties and customs levied by nations, and which fetter free trade? Trade which is so fettered is forced into defective methods. At noon, the snake stretches herself across the river, her back forming an easily-travelled bridge. The snake in the cavern is greedy of gold. As the ferryman brings her the gold pieces which the will-o'-the-wisps flung to him as pay, but which he does not dare to take, she swallows them voraciously, and thereby grows and shines. She may represent wealth, but that wealth which is reasonable enough to recognize its own vocation to be only to serve as a means. We see the snake winding herself through the metallic veins of the earth, and again as a bridge aiding the trade of men. But we also perceive that she knows the fourth secret, unquestionably contained in the words said by her, that it is better to sacrifice one's self than to let one's self be sacrificed. In the coming days, wealth shall no longer heap up treasures for the sake of mere possession, but it shall consider them as a means whose spending elevates and promotes commerce.

There are now three characters remaining: the two will-o'-the wisps and the old man with the lamp, who form a marked contrast, but who in the last scenes unite for a common deliverance. Abstractly considered, I take the will-o'-the-wisps, because of their elegance, gallantry, loquacity, and relationship to the snake, to represent men of the world, or diplomatists; and the old man, who appears in simple peasant's costume, for a priest, who in the paths of science has raised himself by the light of the lamp to a comprehensive insight, and who well knows when the time is at hand. I have already, in criticising the fable of Reynard the Fox, spoken of the difference between the services rendered by the worthy and the unworthy priests. The priest of to-day cannot work alone by a simple and a pious life. The hermit in his cell, the monk in his cloister, are the only ones who can permit themselves such simplicity. The priest who in the temple of truth and love comes in contact with all, like this old man, must have gained through intelligence a just comprehension of the world, if he would rightly fulfil his high vocation. *Sancta simplicitas* alone is no longer sufficient. This is the abstract meaning. But in a more concrete explanation I would say that the

two will-o'-the-wisps are Frenchmen and the old man a German, and that the moral indicated is the union of the French and the Germans, who together would be invincible. The Rhine, across which the snake at last stretches herself as a diamond bridge, is in the future no more to divide but to unite these two nations.

All gather together around Lily, for all wish to become innocent; but Lily can do nothing alone: the individual cannot deliver the whole. Deliverance can come only when all unite at the right time. But the right time will come after the greatest misfortune has happened, and this is when the young prince tries to seize by force the beloved Lily, who would not permit herself to touch him, with the intention of dying at her feet. Terrified, she endeavors to escape, but in the effort touches him and he falls lifeless before her. The snake coils around him to protect him from decay until sunset. Lily can reanimate him, but not give him back his soul; but the snake sacrifices herself in forming over the river a broad and stately bridge, on each side of which are beautiful footpaths, while riders and carriages crowd its centre.

Our company now, anxious for the recovery, descend to the subterranean temple, in which the authorities of ethical life, powerless from their want of unity, wait impatiently for deliverance. As the prince goes to the brazen king, he reaches to him sword and shield, and calls, "The sword on the left, the right free!" The youth now becomes evidently really animated; his breast heaves. The silver king hands to him the sceptre and says, "Feed the sheep!" and now a charming grace overspreads the figure of the youth. The golden king gives him a wreath of golden oak-leaves as a crown, and admonishes him, "Recognize the Highest!" At these words self-conscious intelligence streams again from the eyes of the youthful hero. This whole scene doubtless has for signification that the attributes of true majesty — Strength, Appearance (i. e. the power to manifest itself), and Wisdom — must be found united in the living personality. The fourth king had not seated himself, but was standing, and had previously told the old man that he stood to govern; at which he had been answered, that one would soon see whether that was so, since the Time was at hand. But now when the three kings

rose, he sat down, and so very awkwardly that he fell altogether in a shapeless heap. His stuttering speech had already betrayed that all was not right with him. He was compounded of the metals of the three other kings, but in the mixing the different elements had not been rightly fused, and were hence easily separable; the will-o'-the-wisps played over the gold that was in his veins and licked it out, so that he fell wholly to pieces. Does not this figure without doubt represent the false royalty, which is only a mechanical combination of the different attributes of kingly power, and not an organic, living unity, full of soul and permeated with spirit? This false royalty dissolves into its own nothingness, at the same time that the true royalty, new-born through innocence, adorns itself with the insignia of its dignity.

"Strength, Appearance, Wisdom," the old man announces, "rule the world."

"But," adds the newly-inspired king, "the strength which has ruled in all space and all time, and which will continue to rule, is Love."

"Love rules not," answers the old man; "it fashions all things, and that is more."

The new king now unites himself to the charming Lily, who has laid aside her veil since she has no longer to dread that her look will kill.

The temple mounts upward. All people press towards it and do homage to the new ruler. A general pardon follows, and with it a general rejuvenation. Even the old woman whose hand was withered is made young again by a bath in the river. But the giant, like a stupid fellow as he is, has slept through the whole transformation. He staggers up in the morning to bathe in the accustomed place, but finds it not, and gropes around the bridge with malicious intent. The king angrily seizes his sword. But the clumsy giant is at once fixed in the form of a statue in a court of the palace, where as a sun-dial he marks the passing of the day by the shadow which he throws on the emblems of the hours, arranged in a circle around him. Such a state of petrifaction is the final destiny of the advocates of customs and duties, who, when once the beautiful bridge of Free-trade is safely and permanently constructed by means

of the voluntary sacrifice of wealth, can excite only passing unrest.

The temple of Freedom in which strength and innocence are united through love, and the bridge of free commerce on which all may cross to either side at all times, are sought by every one.

This explanation of the story is, as I well know, one-sided and doubtful. It is however so much a whole that I have not altered it, although the expressions of others, as those of Düntzer, might have prompted me to modification in some parts. I cannot persuade myself that Lily, the emblem of the overthrown Bourbons, can be the false freedom which destroys all. Hotho seems to me to have expressed the general meaning in the following concise words: "In the new Present, which should be at hand, the old snake sacrifices herself so that she may be the foundation for the most active and world-embracing commerce, and that she may lead to the temple from which Wisdom, Appearance, and Strength, reconciled, rule the world, bound in a loving union with Innocence and Beauty, and allied to Art, which destroys immediate life and yet awakes death itself to new life."

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## FACTS OF CONSCIOUSNESS.

Translated from the German of J. G. FICHTE, by A. E. KROEGER.

### PART FIRST.

### THE THEORETICAL FACULTY.

### CHAPTER III.

#### CONCERNING THE REPRODUCTION OF EXTERNAL PERCEPTION.

We have seen how through the discovery of freedom in reflection a power of imagination has sprung up. This power of imagination may, as we have seen, be applied to the reproduction of external perception, since it has already under its control all those elements that belong to such a reproduction; and it will be all the more proper here to

consider imagination only as such a power of reproduction, since altogether free creations by its means appear as yet to be without end or meaning. In speaking of this reproduction we speak by no means of any new development of life, as we did in the case of reflection; for all the conditions of the possibility of such a reproduction are already furnished by reflection.

1. Consider this: such a reproduction is absolutely possible by virtue of the realized reflection. This possibility is standing, immanent in life, ever-present. How, then, does actuality distinguish itself from this possibility, and how am I ever to be impelled—always having possibility within my grasp—to add to it actuality? I answer: that possibility can consist at the utmost in a rule which is altogether a matter of thinking, whereas an actual fact under this rule would produce a contemplation. Hence possibility and actuality are here related to each other like free thinking and contemplation.

2. What, then, will be the presupposed rule of such a reproduction? External perception was a determined limitation of the external sense and the contemplation of space. The rule must be, therefore, a direction of the power of imagination to produce by its own activity an image of just that very same limitation. In the first instance, the limitation comes of itself without freedom. In the present instance, the power of imagination extends itself over the whole region of external sense and space, and is to give itself that determined limitation within this region. The fundamental condition of this free limitation is this, that the power of imagination should overlook the whole region, and have it well separated into classes and kinds,—for instance, the whole of the external sense into the five chief senses, and each of these again according to the chief distinctions of its limitations;—and the whole of the contemplation of space according to the possible limitations of figures, so that it may easily conform to a desired limitation according to a determined rule. The former, the classification, is necessary, so that nothing may be passed unnoticed; the second, a sharp distinction amongst the various determinations of the same sense, is necessary, in order that we may not fill up the image by that which is undeter-

mined and confused instead of that which is strictly determined in perception. This latter distinction requires an acuteness of the senses with reference to sensuous qualities, which, it is true, is partly a natural gift; but which can also be voluntarily acquired by very strenuous attention, without which, after all, the mere natural gift is of no use.

3. This is the inner substance of the rule. But which, amongst the many qualities of perception, is the power of imagination to behold, in the image? Here we arrive at the external substance of the rule: the power of imagination is to be guided by the prototype of external perception. But how can it be so, since the external sense is not affected? for if it were, we should be speaking of a state of attention and not of reproduction. Evidently the power of imagination must be able to reawaken perception in its determined parts. By directing its attention to the important point imagination must be able to reproduce absolutely this point if it so chooses, and to reproduce it exactly as it was in the previous perception. Thus we arrive at another causality of imagination, through its mere being, than the one described above as occurring in a diseased condition of the Ego. And so it is in fact, as everyone can discover by observing himself. But this new causality stands under certain conditions of freedom, since it is dependent not only upon the above described attention, and upon a proficiency in this sort of reproduction on the part of imagination—a proficiency that can be acquired only gradually—but furthermore upon the fact, that the point, which is to be reproduced, must have been clearly and vividly perceived at first. Nor must this reawakening of a single sensual part—which in our representation is something altogether new—be mistaken for the reproduction of the whole image through freedom; for whereas in the latter instance freedom furnishes the whole act of construction, it in the former furnishes only attention: in the latter there are two elements, the whole sphere of that which is to be determined and that as which it is to be determined; whereas in the former there is only a single element, which manifests itself without any free act of volition, just as it did in sensuous perception.

4. This described attention, therefore, observes for the sake

of reproduction and according to the rules thereof. Supervision it already has, voluntarily checking itself everywhere, bringing the observed matter under its proper classification, and determining the qualitative through its limits. Thus it becomes quite clear what that freedom and considerateness is, of which I said before that it pervades attention.

Thus, for instance, you now attend to my lecture with a view to reproducing it. This reproduction will occur all the more easily and happily if you attend to it at once according to a rule of future reproduction; that is, if you not only seize what I say, but, particularly, seize it in the same order in which I say it and observe why I say it in this particular order, attending well to the transitions I make and the reasons why I make them; in short, if you get possession not only of the contents of my lecture, but also of the rule according to which I produce it.

5. It is now also clear how immediate perception is distinguished from its mere image in reproduction. The latter is always accompanied by the consciousness of self-activity, and there arises in it not a single trait whereof the Ego would not be compelled to say, I make it; whereas actual perception is always accompanied by the consciousness of compulsion and confinedness.

6. Reproduction is, therefore, a self-limitation of the power of imagination within its whole sphere according to the prescription of a limitation of the external sense. The rule of this limitation is the conception of that object of external perception which is to be reproduced.

Give me a conception of a—to me unknown—object, signifies: give me the rule according to which I can construe it in free thinking.

Hence arises the very correct logical rule of definition, that it should furnish both the *genus*—the general sphere of the power of imagination—and the *differentia specifica*—that part to which imagination is to confine itself within that general sphere. We here learn also what logic holds to be thinking; namely, the free constructing according to such a rule. The science of Logic, therefore, begins within the sphere of the already acquired free imagination and ignores the real basis of all consciousness. Logic holds that to think is the

same as to imagine something, and—since there is not even a prototype of external perception as a guidance—to imagine something voluntarily; and this is, in fact, a conception of thinking which has become current amongst the whole philosophizing public, but which utterly prevents it from entering the sphere of true philosophy: a proper example as to what the over-estimation of logic and its position at the head of philosophical education, or even as philosophy itself, have effected.

7. Does there occur here in consciousness something absolutely *a priori* and altogether new? I say, certainly. For whence does knowledge obtain its maxim to follow such and no other rule in reproduction? Evidently only out of itself, and moreover from its now more closely determined power to reproduce only through a limitation. Hence knowledge here and by virtue of this contemplation gives unto itself the qualitative law of reproduction.

8. The aim of reproduction is to get possession of the world of external perception independently itself. The source of this world has now been placed within the control of our freedom, to let it flow or check it as we may choose. Thus every science—for instance, natural science—possesses its whole world as its property, and must so possess it, in order to be able to subject at any moment each part thereof to its investigation. Thus we must make also our own world, the inner world of consciousness, our free property, and we are just now, in the present course of lectures, engaged upon this task, without however being able as yet to give an account of our proceeding, precisely because we are still engaged in the task.

9. *Remarks.*—I add the following pragmatical remarks: It is advisable to put the parts of such free constructions—particularly if these constructions are extensive—into a permanent and fixed form; for imagination, left to itself, flows, hurries, and gets confused easily. Imagination should, therefore, be tied down and brought under a supervision. In free thinking such a fixed form is *writing*. If the thinking was not close, this is more easily observed when writing it down or examining it after it has been written down; moreover, that which has been thus approved and secured from oblivion by

its fixed form, gives a solid basis for further progress. In my opinion, a thorough and exhaustive thinking is not well possible otherwise than pen in hand.

The fixed form for reproduction through sight is *drawing*. The reproduction of a visible object must, firstly, seize the figure of that object with those innumerable and often imperceptible transitions from one shape into the other that we so often observe in objects of nature, while the drawing of the figure will testify as to the correct seizing and reproducing. The reproduction must, secondly, reproduce the size of the object.

In regard to the reproduction of the figure, we have an artificial assistant in reconstructing; for the science of geometry includes all possible figures, and hence every possible limitation in nature can be reduced to a geometrical figure. In regard to the size, we have no such assistant; it must be reawakened altogether by the above-described causality of imagination; but the power of attention can practice itself in this gift of reawakening. The result of such a practice is called *a good eye for proportions and distances*, and its attainment is to be proved by the drawing.

So far as the correct seizing and reproducing of *color* in a visible object is concerned, it seems to me that this branch of the business is as yet altogether a matter of chance, and that hitherto no artificial means have been discovered to develop it.

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## RESTORATION OF THE VENUS OF MELOS BY A. WITTIG.

From the German of Prof. Dr. Carl von Lützow, in the "Zeitschrift für Bildende Kunst," by LEWIS J. BLOCK.

Since the discovery (in the year 1820) of the celebrated Venus of Melos, now in the Louvre, manifold conjectures looking to its restoration have been made by scientists. Of these, however, none has succeeded in gaining general approval. The liveliest interest, therefore, was aroused when, several months ago, the news came from Düsseldorf that an attempted restoration of the noble statue had been ventured

by an artist, and accomplished not merely in the form of a drawing, but in an actual model. We have been requested from many sides to give in our illustrations a copy of the newly attempted restoration, and we rejoice that through the obliging kindness of the artist, Prof. August Wittig, we are at this early day able to meet the wishes of our art-loving friends. Of course we only do this with reservation to the artist of all property in his production, on which reservation he necessarily lays the more stress inasmuch as he purposes shaping in marble the model from which our wood-cuts are taken.

"I by no means claim," writes Prof. Wittig, "to have disclosed in my restoration the original conception which filled the soul of the creator of this master-piece. The triumphant haughty carriage of the figure suggested the thought of placing in her hands the shield of Mars, the god whom she had won through her loveliness, and in whose shield, the trophy of her conquest, she beholds with delight her image mirrored. The look of the eyes, the expression and poise of the head, indicate that the figure has some distinct object in delighted view. The shield suggested itself as a near-lying form well adapted to artistic purposes, with which both hands in strict relation to the arms as restored readily fall into unison, while the leg, bent as for bearing something, affords the shield an easy and natural support. Moreover, the broken surface of that part of the leg on which the shield rests indicates, as far as I am able to judge from my copy, without having seen the statue itself, that something originally rested there. That the generally human and specifically feminine idea, which I have made the creative significance of the statue, finds analagous expression both in ancient and modern art, I need not particularly insist on. And so may the victorious Venus return also victorious from all contests into which she shall be led through my restoration!"

We have but little to add to these words. Be it remembered that the thought of placing a shield in the hands of the Venus of Melos after the manner of figures on coins, and of the magnificent Victoria of Brescia, has from time immemorial found numerous adherents in the learned world. Milli-

gen was the first to suggest it; Ottfried Müller, Welcker, and many others, ranged themselves on his side. The objections to this thought are, for the most part, successfully met by Prof. Wittig's restoration. The bending of the upper part of the body to the right, the position of the arms and left leg find therein their satisfactory solution; the poise of the figure is perfect; the lines have the loveliest flow, and neither to a front or side view do disturbing cross-lines present themselves. The remark of the artist, that distinct signs of fracture on the upper part of the left leg point to an object originally situated there, we have found confirmed on the statue before us. The drapery shows at this point not only the usual marks of much exposure to the weather, but also distinct breaks and edges which may result from a later chiseling. On the other hand, the head appears to us a little more sideways inclined, and the eyes directed to an object rather more distant than Prof. Wittig's restoration would allow. This point, however, only a comparison between the model and statue can conclusively determine.

On its discovery, aside from the tip of the nose and the left foot, which had been restored in ancient times, the original was found to want the left arm to the shoulder, and the right arm to a point nearly midway above the elbow. Two years later there were found pieces of a left arm and a left hand holding an apple. On these remnants was based the thought of placing the apple of Paris in the left hand of Venus. Notwithstanding the recent strengthening of this view by a competent critic,* the belonging of these fragments to the statue does not appear to us to stand above question. Moreover, the holding of the apple gives satisfactory explanation neither to the bending of the upper part of the body nor the position of the left leg. This restoration, therefore, by which no solution at all for the position of the right arm is afforded, can as little enter competition with Prof. Wittig's as any other with which we are up to the present time acquainted.

* Fröhner, Notice de la Sculpture Antique du Louvre, I. 174.

INTRODUCTION TO

# HEGEL'S ENCYCLOPEDIA OF THE PHILOSOPHICAL SCIENCES,

BY KARL ROSENKRANZ.

(Written for the Edition of the Encyclopedia recently published in J. H. von Kirchmann's *Philosophische Bibliothek*.)

Translated from the German by THOMAS DAVIDSON.

A library, intended to include the principal philosophical treatises of ancient and modern times, could hardly lay claim to completeness without Hegel's "Encyclopedia of the Philosophical Sciences." It is the work in which Hegel's attempts to reduce his philosophical views to an all-embracing consistent whole, are concentrated. It is the centre from which have radiated a large number of works by other hands. Even from an historical point of view, it is the most remarkable monument of one of the most important periods of speculation.

Hegel, who was born in Stuttgart in 1770, and died in Berlin in 1831, did not write much. Besides a number of criticisms belonging partly to the beginning and partly to the end of his career, he published only four works:

1. The Phenomenology of the Mind, or the Science of the Experience of Consciousness, 1807.
2. The Science of Logic, in three volumes, 1811–16.
3. The Encyclopedia of the Philosophical Sciences, 1817; greatly enlarged in the second edition, 1827.
4. Sketch of the Philosophy of Right, or Outlines of Natural Right and Political Science, 1821.

Everything else that has been published from his pen was edited from his manuscripts by others, after his death.

Hegel had entitled the Phenomenology of the Mind the first part of philosophy, meaning thereby an Introduction or Preparatory Course, which was to be followed by the real system, forming the second part. The warlike events of those times frustrated this plan, a circumstance which, we believe, was not unfavorable to the interests of philosophy. Had Hegel at that time publicly completed his system, he would have hampered his own future development. At that time he was not only engaged in a very close critical combat

with the philosophy of the time, but we learn, from the unpublished scientific writings of Hegel, which I have discussed at length in my Biography of him (1844), what an extraordinary influence the system of Plato was still exercising over him. It has been the custom to compare Schelling with Plato and Hegel with Aristotle, and so the notion has grown up that the Aristotelian philosophy exercised a powerful and abiding influence over him. There can be no doubt that, as far as metaphysics and psychology were concerned, it influenced him deeply; but the Platonic dialectic, especially the Parmenides, the Timæus, and the Republic of Plato, left much more lasting traces in his mind. The reader may convince himself, by consulting Hegel's History of Philosophy, that he treats Plato with much deeper research and much more in detail than Aristotle.

At the time when, as Rector of the Gymnasium at Nürnberg, he had to give instruction in philosophy, he made numerous attempts to put his ideas into a more tractable shape. The "Philosophical Propædeutic," which I edited in 1840, and which forms the eighteenth volume of his collected works, contains the main features of the different forms into which he moulded his philosophy. He then published, along with the Science of Logic, the first part of the entire system, and was able, in this independent form, which occupied three volumes, to give it far greater completeness and distinctness than would have been possible had he given it to the world at the time when he originally intended to do so. The Philosophy of Nature ought properly to have followed the Logic. In a certain sense this really took place, but only in very general outlines, namely, as a division of the Encyclopedia of Philosophical Sciences, 1817.

This, then, was the first attempt to exhibit his system in its entirety. Logic, Natural Philosophy, and Psychology, were, and with good grounds, in the interest of philosophical instruction — the purposes of which the book was intended to serve — treated more in detail than Practical Philosophy, Æsthetics, and the Philosophy of Religion, to which only small paragraphs were devoted.

Ten years afterwards, when Hegel prepared a second edition of the Encyclopedia, he made altogether a new work of

it. By an entirely new treatise, prefixed as an introduction, he endeavored to provide for the necessity which the reader would feel, of making himself acquainted with the idea of philosophy from the standpoint of subjective cognition. He called this the Attitude of Thought toward Objectivity. In it he discussed the metaphysics of Leibnitz and Wolff, Anglo-French empiricism, Kantian criticism, and the Intellectualism of Intuition as held by Descartes, Jacobi, Fichte, and Schelling. His Philosophy of Nature he not only enlarged, but in many respects altered. The Practical Philosophy, likewise, in its third part, which treats of the Doctrine of Ethics, was very much extended, and, as compared with the Philosophy of Right, published in 1821, presented in a much more systematic form. The sciences of Art, Religion, and Philosophy were in like manner considerably improved, but still remained inferior to the other parts. There was throughout, in the notes, an evident effort to clear up or anticipate misunderstandings in regard to the idea of the Absolute Spirit. Some years later Hegel brought out a third edition of the Encyclopedia, in which however nothing was altered. He prefixed, however, a preface to it in which he continued his efforts to defend himself against the polemics which had been levelled at him with ever-increasing violence from all sides, in proportion as his philosophy had begun to tell upon the life of the sciences. A fourth edition of the Encyclopedia became necessary, when it was resolved to publish a collected edition of his works. Then, however, it no longer appeared in its simple form, but was edited with additions from Hegel's papers and manuscripts used in the lecture-room. Leopold von Henning undertook the Logic, Michelet the Philosophy of Nature, Boumann the Philosophy of Spirit. Thus the Encyclopedia assumed the dimensions of three large volumes.

Soon, however, the need was felt for an edition in a more compendious form, similar to the older ones. This was the reason that, in 1845, I prepared a new edition, which is generally called the fourth, owing to the fact that the edition forming the fifth, sixth and seventh volumes of the collected works has made quite another work of it, and is not counted as the fourth edition.

Such is the external history of Hegel's Encyclopedia down

to the present edition. In it, the attempt is made, by a short introduction, and by supplementary explanations at the end, to enable the reader to form as correct and complete a picture as possible of the Philosophy of Hegel as a whole. To accompany Hegel's text with notes did not seem advisable. Such a series of interruptions would destroy that unity which it is one main aim of the Encyclopedia to render salient. It would introduce a foreign tone into the language of Hegel. The continuity demanded by a systematic presentation is, besides, already sufficiently interfered with by Hegel's own notes and additions, without our carrying the process farther.

It is true that the Italian philosopher, A. Vera, has done so, and indeed with perfectly good reason, in an edition which he has made of the Encyclopedia of Hegel. He has taken as his basis the edition in Hegel's works, and accompanied the text with additions from Hegel's other works, or, where necessity seemed to demand, with independent treatises of his own. In this way, however, his survey of the whole of Hegel's system, published in the French language in Paris, occupies seven large volumes. For our compendious purpose another method has to be adopted, and this can be justified only by the manner in which it is carried out.

Since the Philosophy of History, which is foreshadowed at the close of the Practical Philosophy, as well as the Æsthetics, the Philosophy of Religion, and the History of Philosophy, in the Encyclopedia, even in the edition of Boumann, which forms the third part of the Encyclopedia, are so much inferior, the illustrations will have a special reference to this fact, but may also, for this same reason, be very well added on at the end, as an enlargement upon his epigrammatic brevity.

The researches, which have been made to find the idea of Hegel's Philosophy, may be distinguished as the historic and the systematic.

The historic has been discussed in innumerable works. It may, therefore, be presupposed as universally known. Hegel himself has given the substance of it in the already mentioned treatise, "The Attitude of Thought toward Objectivity," which is contained in the Encyclopedia. In a work of my own—"Hegel as the National Philosopher of the Germans," Leipzig, 1870—I have endeavored to bring this subject to a settled

conclusion. I, therefore, observe in this place only that, according to my conviction, Hegel stands in a much more intimate connection with Kant than is commonly supposed, owing to the facts that between him and Kant are found Reinhold, Fichte, and Schelling; and that Hegel maintained an attitude polemical toward Kant in so many particulars. There is no doubt of this, but the fact is not thereby to be got round that Hegel sought to perfect what Kant had begun. Hegel opposed the *skepsis* as held in the Kantian critique; he maintained that the idea of reason was in a positive sense absolute, and is, in so far, opposed to Kant.

But he agrees with Kant completely—

(1) In the acknowledgment of reason as the highest principle of all knowledge;

(2) In the dynamic comprehension of inorganic, and in the teleological comprehension of organic Nature;

(3) In the acceptance of the superiority of the mind over Nature, in consequence of the spontaneity of self-consciousness and the autonomy of freedom.

He differs from Kant inasmuch as he

(1) Maintains the idea of reason not only as concerns the idea of the Good, but also as concerns that of the True as a faculty of the Unconditioned. Kant had opposed the understanding to reason as its limit. Hegel made the understanding an overseer of the reason. The Unconditioned is the basis of the Conditioned; the Infinite of the Finite; the Absolute of the Relative. The definitions of thought are absolutely universal and necessary. We have the conception of the Unconditioned, the Infinite, and the Absolute. Why must their reality be restricted to the sphere of the Good? According to Kant, the theoretic reason fails on account of the unavoidable limitation of the categories of the understanding to contradictions which are insoluble. Hegel combats this. He does not deny the contradiction in conceptions, but he affirms that it resolves itself, through its opposition, into a higher unity, which constitutes the productive basis of the antithesis. It was for this reason that he laid so great a stress upon Kant's doctrine of the antinomies. The entire Dialectic of Hegel's method rests upon the thought, that, according to Kant's doctrine as it is, contradiction is unavoidable; but that, in this

case, it cannot be passed over with a merely subjective silence, on account of the alleged imbecility of our knowledge, but that it must elevate itself objectively to that unity which renders it, in the first place, conceivable.

Hegel admits with Kant that speculation cannot contradict experience. He is, therefore, an adversary to all fabricated notions which are so generously advanced in the hypothetical treatment of the sciences, and whose problematic origin is after all entirely forgotten on account of the frequency of their employment. Here belongs, for instance, the conception of an Atom, in so far as it is treated as a matter of fact. Whatever in Natural Science cannot be authenticated in a rational reality as a matter of fact, can on no reasonable grounds be maintained; this is one of the main points which Hegel, in his Nature-Philosophy, especially in his Physics, is never tired of repeating.

Kant had demanded two things for the possibility of experience: in the first place, intuition, and in the second place, the conception of the understanding. Intuition without conception is, in his opinion, blind; a conception without intuition is empty. Both must, as he expresses himself, be combined as constituent parts of cognition in order to produce a judgment. Hegel defended the conception against the charge of emptiness, asserting that it had itself for content; but he resigned the right of experience so little, that, with the exception of Aristotle, Bacon, and Kant, no philosopher has ever paid so much respect to empiricism. Hegel is, like Kant, an idealist in so far as he proceeds from the idea of self-consciousness and reason; but he is, as regards the maintainment of reason in reality, the most decided realist that ever sought to comprehend with the greatest accuracy the world of appearances, in the totality of its multiplicity, and to overcome it, by tracing out its internal connection.

(2) In regard to Natural Science, he agreed with Kant in the principles; he differed from him in the stress which he laid upon the systematic Unity of Nature. In Kant, we do not find Nature-Philosophy as an entirety. His Physical Geography is, considering his time, a very noteworthy attempt at a Cosmos, but is without a strictly scientific method. Hegel's Nature-Philosophy proceeds in an entirely speculative man-

ner from the idea of Nature, but imposes upon itself the duty of proving, in an empirical, matter-of-fact manner, each step of the Idea. No other philosopher of modern times has bequeathed such a complete Nature-Philosophy, with such distinct articulation, and in such close connection with the unity of his entire system. Hegel is seldom considered from this point of view, although it is so directly of importance to our time. Of Fichte, Schelling, as well as of Herbart, Krause, Schopenhauer, and Baader, there exists no Philosophy of Nature as an organic whole, or as a whole adjusted to the rest of their system. The reader must examine the treatment of Nature-Philosophy by Michelet, in the second part of the Encyclopedia, in order to convince himself into how great detail Hegel has carried Natural Science.

(3) In regard to the mind, Hegel originally agreed with Kant in having, on the one side, only a doctrine of consciousness; on the other, only an Ethics. As Kant came to his Anthropology, Hegel at a later period came to his doctrine of subjective mind and to a doctrine of absolute mind, which is represented in Kant partly by the æsthetic faculty of judgment, partly by religion within the bounds of pure reason, without possessing an express consciousness of the systematic relation of these various elements. In principle, Hegel also agreed with Kant as regards the idea of the mind, inasmuch as he comprehends it as a freedom, as an ideal activity, which, as its own content, creates for itself its peculiar form. But, in Kant, the centre of gravitation rests upon morality, while Hegel does not depend in so great a degree upon the power of the individual, but wishes to rear him, by communion with the objective organism of ethics, which he calls *State*, to the state of a man in whom respect for the right laid down as law, i.e. legality, is combined into ethical beauty, with the conscientious adherence to his peculiar sense of the terms Good and Morality. This lofty intuition, connected with Schiller's practical ideas, is the Hellenic trait in Hegel, which however did not lead him to abate a tittle of the sharpness and energy of the Germanic principle of individuality. The moral rigorism of Kant is transfigured by Hegel into a higher ideality reconcilable with Nature. Hegel often appears polemical toward Kant, since he opposes the reality, at which

the ethical idea in the family, in the civil community, and in the state, arrives, to the "infinite progression" of duty. The Good *must be;* in this respect he does not gainsay Kant: but the Good *is* also; and the experience that there are wicked men, that crimes are perpetrated, that outward circumstances turn out sadly for the most moral subjects, does not cancel the fact that the development of History shows us, in general, the effort of mankind to bring the will according to its truth—or, which is the same thing, the Good—into existence. The laws of nations contain the idea, which they form to themselves, of the Good.

"*Res publica*" was defined by Kant as a human commonwealth, in which not the personal caprice of an individual, but law, was the ruling power. The law enforces obedience; but, according to Hegel, the citizen of a state must conform to the law not only outwardly, formally, but he shall recognize in the law the essence of his own freedom, and shall make its realization habitually a second nature, an ethical custom. A mere state, with the coldness of formal enforcement of obedience to the existing law, did not satisfy Hegel; but the laws should animate themselves into the warmth of the self-sacrificing disposition in the will of the individual. The laws (ethical relations) inform us what we must do; we need not trouble ourselves with morbidly poring over the question what our duty may be. The state shall not only be the means of the egoism of our personal security, of our material welfare, of our intellectual culture, but must be through and through the element of self-conscious freedom, and this, in its turn, must be the highest, all-ruling aim.

In the higher spheres of mind — in Art, Religion, and in the History of Philosophy — Kant seems morally confined, prosaic, and inadequate. It is here that Hegel infinitely surpasses him, and not him alone, in sublimity, poesy, and richness of intuition. Notwithstanding all the unfinishedness in which, surprised by death, he was compelled to leave this sphere, a source is contained in it from which science will have for a long time to draw.

These intimations will suffice to show how closely Hegel developed with Kant historically, and wherein the completion of the great work, begun by Kant, was made by him. Hegel

grew by incessant self-criticism. He continually reformed himself. He was polemical towards Kant, only in order to advance upon the ground of criticism to a truer insight. Also in a systematic view he agreed with him principally in order to elaborate him further and better. In his Architectonics, in the doctrine of Method contained in the Critique of Pure Reason, Kant has given the following classification of his system:

(1) The Physiology of Pure Reason as the science of that which may be;
(2) The Metaphysics of Nature as the science of that which is;
(3) The Metaphysics of Morals as the science of that which ought to be.

Hegel names these three divisions the science of

(1) The logical Idea;
(2) Nature;
(3) Mind.

Rationalism, Naturalism, Spiritualism, are the elements of the organic whole of Philosophy.

The logical Idea is the Absolute as a formal principle. Thought is the absolute Prius, the absolute presupposition which posits itself from itself, which we express by *reason* since Kant's time. Everything particular, peculiar, is subject to the universality and necessity of the categories of the absolute Idea. Nature and mind are in so far dependent upon reason, for they cannot be imagined at all without it. Thinking, as absolute, contains its own determinations, for which content it presupposes nothing else; but in relation to nature and mind, it is the presupposition of them as their absolute form. But this is, according to Hegel, not external and existing to them only in the discursive thinking of our consciousness, but is *immanent* in them.

Nature is in itself rational, but it forms, by its externality in space and time, the opposition of the logical Idea, for contingency comes into existence with matter. With contingency, since it is inseparable from existence in space and time, comes into existence also the possibility of irrationality. Nature realizes the conception of the Idea, but it remains contingent in the realization itself, whether the indi-

vidual reality corresponds to the idea, or whether, as it may also be expressed, the conception actually realizes itself. Nature, for example, brings forth in the spring thousands of the most gorgeous blossoms, which ought to ripen into fruit; but a frost blasts them. This is at bottom an irrational occurrence, but is, on account of the externality of existence, entirely possible. Darwin's expression, the Struggle for Existence, is one in itself entirely true, based upon a deep contemplation of nature. Hegel calls it the impotency of nature to hold firm the idea. He does not mean that nature is altogether destitute of power to realize reason, but that the realization of the idea in the individual is exposed to chance. In time and space lies the final ground of all finitude, all incompleteness, all want, all dwarfing. But the possibility of the favor of circumstances also lies in this.

Nature is the medium of the Idea, through which she attains the highest form of her existence, Mind. Mind, says Hegel expressly, is the Absolute. Its idea is, therefore, the real principle of the Absolute. This idea of Mind distinguishes Hegel's Philosophy from all others. It belongs at once to the idea of Mind that it be the thinker, but also that it realize its thinking as volition through the mediation of Nature. Hegel agrees with Kant in considering Mind as essentially free. Nature is, to be sure, existence rational in itself, but existing in unconsciousness. The mind knows what is rational, and makes use of Nature as a subordinate instrument. Freedom is its own absolute end in thinking and willing. In Nature there exists instinct but not will, for to volition belongs the idea of that which one wishes.

The consciousness of man, as of the individual mind, has still unconsciousness as an element in it. The dream is the theoretic; the desire which arises unwished-for is the practical form in which Nature continues itself within the mind. Hegel avoids mentioning God in the paragraphs of the Encyclopedia, because with this word arise at once the various ideas which men have of God in their beliefs. He makes use of the expressions, Idea, the Absolute, the Absolute Idea, the Absolute Mind, in order to satisfy the scientific consciousness. Only in the exoteric observations does he speak of God.

It is doubtful, as far as the Encyclopedia goes, whether he intended the Absolute only as a process in Art, Religion, and Philosophy, or whether he intended it also as a subject in and for itself. If we take the first supposition, then what we call God, and what Hegel calls the Absolute Idea, belongs solely to humanity. It is, then, the Absolute Mind in so far as it raises itself to absoluteness. Religion is, then, only an imperfect form of the fantastic idea of the Absolute, which is first truly known in Philosophy. But from the whole design of Hegel's Philosophy it is not to be supposed that Hegel held this view; for in the Phenomenology of the Mind, 1807, he says expressly that absolute knowledge no longer changes the content of revealed Religion. Truth is arrived at in it, as absolute, and it depends only upon the completion of the side of certainty through the idea. But he expressly teaches also in his Philosophy of Religion, and in his Proofs for the Existence of God, that God, as an absolute substance, is also an absolute subject, and, indeed, a subject in itself independent of our opinion and idea.

Mind is also only a mere word; it depends upon what is thought under it; and here the idea of freedom, which is conscious of its reason as of all truth, will forever be the only satisfactory outlet from the labyrinths of Positive Theology, from the false hell of a hypochondriac Pessimism, denying reason, as well as from the false paradise of a eudæmonistic, rotten Optimism.

Both Hegel and Kant taught this outlet, which includes within itself the absolute pain of the deepest self-abnegation.

Finally, as regards the method, the reader can enlighten himself on the correct idea of Hegel's Encyclopedia from the following considerations:

Science contains, as a system, the totality of all particular ideas.

These form a series in which one must be first and one last. The progress from idea to idea is in so far a continuous one. One can represent it to himself as without any interruptions. But the ideas have a relation to each other. One is more simple, more destitute of content than another. Subjectively, as a thinker, I cannot understand the higher, richer idea, if I have not understood the lower, poorer one presupposed by it. But

even this connection is the progress of the thing itself. Thus, while the idea *becomes* for me, as the person thinking it, it also assumes a form for itself. The way of the subjective cognition, therefore, can, in order to comprehend the truth, be no other than that of the objective becoming. They both must coincide in Philosophy. This method distinguishes the philosophic consciousness from the ordinary one, unconscious of the idea. I cannot comprehend a surface, if I do not know what a line is; also I cannot comprehend a line, if I do not know what a point is; but I cannot comprehend a point, if I do not know what space is; and I cannot comprehend space, if I do not know what Nature is, etc.

Nature, space, point, line, surface, etc., are a self-explaining series of these ideas. It is not I who place in the absolute continuity of space the discreteness of a point, but it is space which itself determines the discreteness of punctateness; the point is not formed by me into a line, but it is itself, which, by its own motion in space, determines the form of the line, etc.

Every idea is for itself positive, or, as it is also expressed, identical with itself. It is determined in itself. Point is a different idea from space or line; line is a different idea from point or surface, etc.; but the ideas are united by themselves, the one with the other. Hegel calls this the negativity or the self-motion, the immanent nature of the idea. The higher idea is related negatively to the lower, which is presupposed by it as a condition. It cancels it in itself. The negation of negation is hence the universal form, in which the transition from idea to idea appears. The higher idea negates the lower, but also contains it within itself. That which forms the essence of the relatively lower idea is not lost in the higher form. It remains in force as an element of it. It is no longer posited according to its exclusive determinateness existing for itself, but as a necessary element of the higher stage. The point vanishes as a point in the line, but is contained in the linearity *in* itself. A line is, in its continuity, no atomic aggregate of points, but the point is ideally existent in it. When a straight line is cut from another, this can happen only in one point.

This progress is called by Hegel the Idea, which, as being

universal, determines itself to its particularity, as a particular one, to its individualization. The point, compared with the line, is more abstract; it is the wholly universal, elementary, formless form of space-formation. But no figuration of space is imaginable without it. The line is more concrete. As a particularity it is distinguished from itself in the opposing forms of straight and curved, etc.

Every idea is, as thus determined, the result of all that have preceded it as a condition. They are collectively contained in it, but not only as an external sum, but likewise as a concrete unity. The plane or surface, for example, is no mechanical composition of lines, but the line is everywhere possible in it, and forms the boundary of the surface as its inherent element.

Every concept is opposed to two others, whose medium it forms. The line is on the one hand opposed to the point, on the other, to the surface; the surface again is on the one hand opposed to the line, on the other, to the body (mathematically so called). The precise reference, which lies in the idea of the thing, must be held firm in opposition. At its first introduction into a system, every idea can have only one antithesis immanent in it; for instance, the idea of cause and that of effect. But farther on, at other stages, an idea may gain also other relations. One and the same thing can, therefore, be placed in opposition from different standpoints. Nature is opposed to reason, i. e. to the absolute idea in the form of abstract thought, by means of its material externality. But it is also, on account of its unconsciousness and necessity, opposed to the mind as the free, self-conscious causality. It is also opposed to art in so far as it produces the Beautiful unconsciously; art, on the contrary, makes itself consciously its own, and uses nature as a means thereto.

The relatively lower ideas are metamorphosed to a higher existence, in the higher stage of the idea. Art, for instance, comprehends nature, but idealized, i. e. free from all contingency of local and temporal origin.

Hegel said, therefore, and rightly, that science is not only enlarged in its progress, but is also deepened; that with every new definition, it defines the idea of the True more truthfully. Not seldom does he use the expression, that the higher

is the truth of the lower. He would not refuse, thereby, to the latter the reality and truth which belongs to it, at its own stage, but, in comparison with the higher stage, the existence of the idea in the lower form of its being, is not the actual truth. The lower can only be actually understood from the higher, the earlier from the later, in the system according to the series of ideas. Ethics—for instance, the truth of morality—exalts the immediate naturalness of the soul's instincts to that which they should be in themselves.

The progress of the systematic cognition is, in its process, regressive, analytic, inductive, inventive, because it unfolds the absolute idea from the first elementary beginning into definitions more and more precise, and proceeds to that which is the productive basis, the final cause—the Entelecheia, as Aristotle expresses it—of all the preceding ideas. But it is likewise progressive, synthetic, deductive, architectonic, because it proceeds from the universal through the particular to the individual and single. The ideas form not only a series, or an arithmetical progression, wherein each has its prescribed place, but also a circle, in which the last definition again meets the first. The first definition of Hegel's system runs, Being is Being; the last, Being is Absolute Mind.

Between these two lie all the others. Hegel's first definition of the Absolute is that of the Eleatics; but it is cancelled by the next in order, "Being is Non-being." This definition is wanting in the Eleatics; for they only said, "Non-being is Non-being." Non-being presupposes Being, but, as a negation, it *is* likewise. Time, for instance, which, as future, is not yet, is therefore a non-existent; Non-being is its Being. The solution of this antinomy is the idea of Becoming, in which Being as well as Non-being are contained, partly in positive beginning, partly in a negative ceasing. Becoming is the Heraclitic, more truthful definition of Being, which has Non-being as an element of itself, not as an abstract antithesis outside of it.

But it should be borne in mind, that in these discussions Hegel does not treat of a substance, but of thoughts. They are the ideas of Being, Non-being, Becoming, with which the system originates, as with the most universal and most

undetermined definitions of the Absolute. It is very wonderful, and, notwithstanding all the study of the History of Philosophy, anything but a proof of its comprehension, that the beginning of philosophy, as Hegel here presents it, has been so often found untenable, as being a contradiction. For what does the Platonic Parmenides exist? Have not the dialectic of Being and Non-being, the struggle of the extreme Eleatics and the extreme Heraclitans, from all points of view, developed in him? Being is the most universal determinateness, which has no further content; but it is inherent in all the other definitions following it, as the most universal; also that of mind, as of the Absolute. Every other idea, besides that of abstract Being, with which a philosophy begins, demands the presupposition of the idea of Being. For him who philosophizes as a thinking subject, the same is interposed; for the consciousness must be so far formed as to elevate itself from every contingent singularity of its empirical content to the abstraction of the idea of Being. It is this side which pupil and teacher have at first to watch. Before this, the thought cannot recognize itself as thought, it is not able to complete the abstraction of Being; but this pedagogic training of the consciousness to Philosophy falls in the same elementary instruction, and the concept of Being-in-itself is independent of the act of thought, through which it is posited for us. The thought of the idea of Being is the subjective side; the idea itself, the objective side. It may be observed, in numberless statements in these inceptive forms of thought, that the demand for an absolute abstraction is not complied with, when throughout a something, if possible, a sensuous something, but not pure Being, is conjectured or imagined. To be something is a much more precise qualitative definition of Being than Being in general. Or, because the beginning and end touch each other, man makes shift to imagine under Being the Absolute as such, which, according to Hegel, is only possible at the end of the system, as its highest result in the idea of Being, as of the absolute Mind.

With this we might easily conclude these introductory remarks, but still another point merits our attention. It is the triadic form in which Hegel's Philosophy is built up. Hegel himself praises Kant, as the man who has made mention of

the triplicity of the idea. It remained hidden in Kant for this reason, that he acquired late the habit of treating everything according to the four categories of quantity, quality, relation, and modality. But he makes the trichotomy prominent in every category which contains an antithesis and its solution. In quantity, unity is opposed to multiplicity; both are annulled in the totality, as a unity of the many. Thus it happens in quality, with position, negation, and limitation; in relation, with substantiality, causality, and reciprocity; in modality, with possibility, reality, and necessity. In the Platonic Philosophy, as well as in that of Plato himself, and in the Neo-platonic philosophers, we find also the triads of the idea. They are, in so far, nothing new in Philosophy. But Kant brought this form, as that necessary in thinking, to consciousness, without entering upon a further deduction of it. Hegel here follows Kant entirely, since he likewise holds fast Fichte's effort at a deduction of categories, as thesis, antithesis, synthesis. He completed the dialectic of the categories. For their deduction, Kant knew at first only how to aid himself with the idea of time, because he was driven by Hume first to the idea of causality, and, in the transition of the cause to the effect, to the scheme of time. Fichte sought the deduction in the consciousness, inasmuch as the Ego opposed itself to the Non-ego. Hegel banished the schematism of time, as well as the duality of consciousness, from this region. He seized the thought of the idea as of an independent process. One cannot be thought without passing over to the idea of many, opposed to it. In multiplicity, the one is at the same time posited. Multiplicity, as a numeric quantitative unity, is totality. Thus position has in negation its immanent contrary; limitation, i. e. the negative boundary, is likewise positive, etc. There is now no question that philosophers, as soon as they advance from the circle of simple, ontologic categories, as soon as the question in science is upon multilateral ideas, may fall into the most manifold error among themselves, and, therefore, into contradiction. But the method of the philosophic cognition cannot, therefore, leave off the attempt to find the actual triads, because otherwise it were without all rule for the positing of the determinations of the idea. From

the great and most comprehensive articulations of the idea, it must patiently enter upon wider distinctions. Its syntheses must not be mere additions of thesis and synthesis, but must set forth the higher principle, which sends forth the thesis and antithesis. The last is in itself the true first. With reference to us, as Aristotle expresses it, the thesis is the first; but with reference to the reality of the genesis, the last to the cognizant consciousness is the first. This is what Fichte called the synthesis, and what Hegel calls the negative unity of the idea, or the concrete universality. His Encyclopedia remains, therefore, a very important work, even for the future of Philosophy, because it has undertaken to accomplish, with critical consciousness, the idea of its totality according to the triadic form of the idea.

Now-a-days nothing is spoken of except the inductive method. It has for a decided problem its complete justification, and is admitted into Hegel's Logic as an express element of cognition. But when it is presumed that this is sufficient in itself, it is a great error. For the synthetic or deductive form has, at least, the same claim and the same necessity in certain cases. What has science become under the design of proceeding in the inductive method? An entirely methodless, inorganic reflection, narration — an entirely capricious combination — in which the reader must be glad if the authors show that they have not wholly forgotten the principles of formal logic, and, at least, attend to a fixed order. In the titles of books the expression "inductive method" makes a great show; in the preface, a great influence is exerted against the speculative philosophy by it, but in the books themselves people give themselves up to the arbitrariness of reasoning. To such hap-hazard Hegel's method forms a strong contrast. Hegel utters, in a popular manner, by means of his method, the discipline of thought in these words: "Man must know what men have said; but (he adds,) this is not so easy as people imagine."

# THE PHILOSOPHY OF ARISTOTLE.

Translated from the German of G. W. F. HEGEL.

## III.—THE PHILOSOPHY OF NATURE.

Of the special sciences which Aristotle has treated, the PHYSICS contains an entire series of works on physical subjects which form a tolerably perfect arrangement of the material constituting the entire compass of Nature-Philosophy. We will give the general plan. His first work is his *Physical Science, or Concerning Principles* (*Φυσικὴ ἀκρόασις ἢ περὶ ἀρχῶν*), in eight books. He treats therein of the comprehension of the idea of Nature in general—of *Motion*, and of *Space* and *Time* as it belongs to it. The first manifestation of the Absolute Substance is MOTION, and its moments are space and time; this idea of its manifestation is the universal, which realizes itself first in the material world, passing over into the principle of individualization. Aristotle's Physics include what is called by the physicists of the present day the Metaphysics of Nature; for our science of Physics includes a treatment only of the visible, and of the delicate and excellent instruments they have made—not what has been *thought* about the matter. Directly after this first work of Aristotle follow his books concerning the heavens, which treat of the nature of body in general and of the first real bodies—the earth and the heavenly bodies; and besides this it treats of the general abstract relation of bodies to each other through mechanical heaviness and lightness, which we call *attraction;* finally, of the abstract real bodies, or the *elements.* Then follow the books upon origination and decay, the physical process of CHANGE (previously the *ideal* process of motion was considered). Besides the physical elements, those moments also enter here which are posited in the process as such: heat, cold, &c. The former elements are the real, permanent side; the latter determinations are the moments of beginning or ceasing which occur only in motion. After this follows the subject of Meteorology; it exhibits the general physical process in its most real forms. Here are treated particular determinations: rain, saltness of the sea,

clouds, dew, hail, snow, frost, wind, rainbow, boiling, cooking and baking, colors, &c. Upon some subjects, e. g. colors, Aristotle wrote separate treatises. Nothing is forgotten; still the exposition is very empirical. The book on the World, with which he concludes, is held to be spurious: a special treatise addressed to Alexander, in part contains the general principles of things such as are already found in another place, and hence it does not belong in this cyclus.—From this Aristotle passes over to the treatment of Organic Nature; and among his works are found not only a Natural History, but also a Physiology and Anatomy. To Anatomy belong his works concerning Locomotion, and concerning the Parts of Animals. Upon Physiology, he speaks in the writings concerning the Birth of Animals, and concerning the Common Movement of Animals; then he treats of certain distinctions—of youth and old age, of sleeping and waking; he speaks of breathing, of dreaming, of the length of life, &c.,—all of which he treats partly empirically, partly speculatively. Finally, there follows the History of Animals; not, however, merely as Natural History in the ordinary sense, but rather as a treatise of animals in general —a sort of physiological-anatomical anatomy, if the expression may be allowed. Besides this, a botanical treatise upon plants (*περὶ φυτῶν*) is ascribed to him. Thus we see here Natural Philosophy in the entire completeness of its external content.

As regards this plan in general, there is nothing said to show that it is or is not the necessary order in which natural philosophy or physics must be treated. For a long time physics has retained this form and tendency, inherited from Aristotle, to deduce the parts of science from the idea of the whole; so that even the non-speculative method has retained this connection as external arrangement. This order is to be preferred to the arrangement in vogue in our physical textbooks: they present a quite irrational succession of objects heaped together at random, and indeed this is more in accordance with that mode of consideration of nature which seizes upon the sensuous phenomena of nature quite without comprehension and reason. At an earlier period physics contained still something of metaphysics; but as experience

showed that they were not able to come to an agreement in that field, the physicists have resolved to hold aloof from it as much as possible, and to hold fast to what they call "experience." For they suppose that they obtain in the field of experience the pure truth uncontaminated with thought, fresh from the hand of Nature, in their grasp and before their eyes. Although they cannot do without the IDEA, yet they have a way of letting pass as current coin, through a kind of silent assent, certain ideas such as "Composition from parts," "Forces," and the like, and use them without in the least knowing whether they have any truth, and in what it consists. As regards the content, however, they fail to express the truth of the object, but give only the sensuous phenomena. Aristotle and the ancients, on the contrary, understood under physics the comprehension of the idea of Nature—the Universal; and on this account it is called by Aristotle the Science of Principles. For in the natural phenomenon there enters essentially this distinction between the principle and its result (the result is the phenomenon), which vanishes only in what is really speculative. However, if on the one hand the physics of Aristotle is preëminently philosophical—not experimental, yet on the other hand the empirical is found in due measure. As has already been remarked when speaking in general of the Aristotelian philosophy, the different parts fall asunder into a series of ideas each defined by itself; such is here the case, and on this account we can speak only of each in its details. The relations of one to another are not unfolded; for each is treated as existing for itself. But in descending into details Aristotle proceeds beyond the sway of the [universal and necessary] idea, and his treatment becomes a superficial manipulation of grounds and reasons, and an explanation of proximate causes, such as we have in our science of physics.

As regards the general idea of Nature, it must be allowed that the same is exhibited by Aristotle in the highest and truest manner. In the idea of Nature according to Aristotle (Phys. II. 8) two determinations are found: the concept of *final cause*, and that of *necessity*. Aristotle seizes an object in its ground; this gives us the time-honored antinomy

or twofold point of view arising from the opposition of the category of NECESSITY (*causæ efficientes*) to that of CONFORMITY TO END (*causæ finales*). The first mode of consideration [according to efficient cause] is that according to *external necessity*, which is the same as contingency: in general, the objects of the natural world are apprehended as determined from without through natural causes. The second mode of consideration is the *teleological;* but conformity to end is either internal or external, and in modern thought the latter has for a long time been dominant. Thus the mode of consideration varies according to the stand-point assumed, and on one occasion it seeks external causes, while on another it uses the form of external teleology, which posits the end [purpose and design] outside of the natural. These determinations are well-known to Aristotle; he examines their essential nature to see how far they have validity. Aristotle's idea of nature is, however, more excellent than the one current in our time; for the chief thing with him is the category of the FINAL CAUSE as the internal determinateness of natural things. Thus he has apprehended nature as LIFE, i. e. as that which is final cause in itself and unity with itself; living being does not pass over into another, but determines, through this principle of activity, its changes in conformity to its peculiar content [or purpose], and hence preserves itself therein. Aristotle has in this view before him the internal, immanent conformity to design, and he considers Necessity to be only an external condition to this. On the one hand, therefore, Aristotle defines nature as the final cause, which is to be distinguished from fortune and accident: through this definition, it seems to be the opposite of necessity, which it contains also in it; *secondly*, he defines the manner in which Necessity appears in natural things. The term Nature one ordinarily thinks to include Necessity, and understands the Natural to include what is not determined through design. Nature has for a long time, according to the current belief, been defined philosophically and in truth as the province exclusively under the sway of Necessity. The view of Nature becomes defective, according to the common notion, when it allows the validity of the category of design or final

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cause. The two moments of substance which we have considered, the *active form* and the *matter*, correspond to these two determinations.

We have first to consider the idea of conformity-to-end [adaptation to a purpose] as the ideal moment of Substance. Aristotle (Phys. II. 8) sets out from the proposition that the Natural is the Self-attaining; the difficult point consists in understanding this statement. "The first difficulty is this: what hinders Nature from acting according to a purpose, and that the best one? Jupiter rains not in order to make the corn grow, but from necessity. The rising vapor cools and falls as rain; it is therefore incidental that the corn flourishes. So also when the corn is destroyed by rain; the rain does not happen for this purpose, but the destruction is only an accident." That is, the connection is not a necessary one, but only an external one. This contingency pertains both to the cause and to the effect. Aristotle asks: "If that is the case [universally], what hinders us from assuming that what appears to be a part," for example, of an animal, "could really stand in an accidental relation also? That, for example, the front teeth are sharp and adapted to cut well, while the back teeth, on the contrary, are broad and fitted to crush the food—that this coincidence may be a mere accident without design. And so with the rest of the parts in which adaptation seems to exist; so that in this case the vital organism, in which all was so constituted in a contingent manner that it arrived at a conformity to purpose, now that it once exists, preserves itself, indifferent to its original origin from external necessity." This thought, adds Aristotle, was that of Empedocles, and according to it the first origin was depicted as a world peopled with monstrosities—e. g. the bodies of bulls with human faces—which shapes, however, could not endure, but perished, for the reason that no self-preservation could exist until the parts in conformity to a purpose had found each other; how, without these fabled monstrosities of the ancients, can we explain the multitude of animal races that have perished through inability to preserve themselves? In this way, moreover, the expression "progress" (a thoughtless form of development) is used in our modern philosophy of Nature. This is an idea at which a system of Natural Phi-

losophy easily arrives: that the first productions of nature are mere essays or attempts, none of which could abide that lacked conformity-to-purpose. [The reader will think of Darwin's "Natural Selection" here.] Nature, however, as Entelechy [self-end] is that which produces itself. Aristotle, therefore, replies [to the idea of Empedocles], "It is impossible to accept this idea. For that which happens in Nature, happens always or nearly always the same" (the external universality as constant return of what has disappeared); "but nothing which is through accident or chance reproduces itself. In the next place, that which contains a purpose (τέλος) conforms to this as well in its antecedents as in its consequences: so that the nature of the thing may be inferred from its constitution, and conversely its constitution from its nature; this follows from the idea of design." We call that the nature of a thing which becomes manifest through the becoming of a thing; it is the internal universality and adaptation to a purpose which realizes itself; so that cause and effect are really identical, since all the particular members are related to this unity of design. "Whoever assumes an accidental origin of things denies, in so doing, Nature and the natural order of things; for the Natural involves the possession of a principle in itself, by means of which a continual progress is made until the attainment of its end and aim." In this expression of Aristotle is contained the adequate, true and deep idea of *living organism*, which must be regarded as self-end: a self-identical which repels itself from itself, and in its externality still remains identical with its idea,—and hence is the self-attaining idea. Leaves, blossoms, roots, are produced by the plant and it by them; they produce the seed, and yet they presuppose the seed as their own origin. The chemical product seems, on the contrary, not to presuppose itself in such a manner, but rather to be a third produced from an acid and a base; yet even here the general essence of the two sides, their affinity, is extant beforehand, though as mere potentiality, while in the product it is mere *thing*. The self-preserving activity of life, however, produces this unity in *all* its relations. These statements agree substantially even with the assertions of those who do not take this view of nature. They say, for example, that is preserved

which is constituted as though it were conformable-to-design. For this is nothing but the self-producing act of nature. In the modern style of looking at life, this idea has been lost in a twofold way: first, through a mechanical philosophy which posits pressure, impact, chemical relations, forces, or some sort or other of external relations, as the basis; and though these are immanent to the nature, yet they do not flow from the nature of the body, but are a sort of appendage, as external as coloring matter in a fluid. Secondly, the theological system of Physics sets up the thought of a supramundane intelligence as cause of nature. The idea of Aristotle which has been stated above was first reestablished by the Kantian philosophy, at least so far as the organic realm is concerned, and the living organism is therein pronounced to be the self-end. Although this takes only a subjective form with Kant (his whole philosophy, indeed, has only a subjective form), and hence the living organism [vitality] would thus be defined [i. e. as self-end] only for our subjective reasoning, yet there is contained in this view the adequate truth that the organic form is the self-preserving. That the most recent times have returned to the rational view of this subject, is nothing else than a justification of the Aristotelian idea.

Aristotle characterizes this final cause which the organic manifests, and speaks of it in relation to the means which it uses (Phys. II. 8): "If the swallow builds her nest, the spider spreads his net, trees extend their roots in the earth for the sake of nourishment, then there exists in them such a self-preserving cause or a final cause." This instinct of action, namely, produces a work for its own preservation, as a means through which its essential nature is joined to itself and reflected into itself. Aristotle next brings what is here stated into relation to general ideas which he had already established previously: "Since nature is twofold, as matter and form, the latter [form] being the end and aim on account of which all changes occur, nature is final cause." The active form has, namely, a content which as content of the potentiality contains the means which manifests itself as conformable to the design, i. e. as moments posited through the particular idea. With how much soever repugnance one

may contend, in the modern way, against the idea of an immanent final cause, yet he must always acknowledge the existence in animals and plants of such an idea which preserves and restores itself in its other. For the reason that the animal, for example, lives in water or in air, he is so constituted that he may sustain his existence in air or water; thus, for example, the gills of the fish are adapted for water, the lungs of the mammal for air; and conversely, for the reason that he is so constituted — i. e. for air or water — his habitat is determined. This activity of transformation, therefore, does not belong to living beings as an accidental affair; it is excited by the external potencies, but only in so far as it is in conformity with the soul of the animal.

In this connection, Aristotle institutes a comparison between Nature and Art. Art also connects antecedents and consequences with a link of design. "A mistake can be made by Nature as well as by Art; in the same way that the grammarian at times writes false syntax, or the physician mixes a potion incorrectly, so Nature at times misses the achievement of what she proposes. Her failures are monstrosities and abortions,—which, however, are only failures when considered as the product of a designing cause. The marriage of animals or plants is productive first of mere seed, and corruption is still possible when in that state." The seed is, namely, the means, and it has not yet reached the state of Actuality, which is free, firm, independent, and indifferent. In this comparison of Nature with Art, it is customary to place before one the external conformity to design, the teleological view, the acting according to purposes: and against this view Aristotle speaks decidedly when he remarks further, that if Nature were mere activity according to a purpose, "then it would be absurd to refuse to think of action in conformity to design for the reason that one cannot see the moving object stop and consider." The understanding enters with the conception of this final cause, and with its tools works upon this idea of matter; we carry over this idea of external adaptation to a design, to Nature. "But," says Aristotle, "Art does not take counsel any more than Nature. If the form of a ship were the inner principle of the wood, then it would act from nature. The act of nature resembles

that practice of art most nearly, wherein one cares for his own preservation." Through internal instinct the animal fears danger and acts for his own safety; health is, therefore, essential in him, yet not as conscious purpose, but as an intelligence fulfilling its ends without conscious thought.

As Aristotle here contends against an external teleology, he likewise makes a correct remark (Phys. II. 9) against the mere external necessity; through this we come to the other question: how necessity exists in nature. He says: "They usually think of the origin of necessity somewhat as if one should suppose that a house is through necessity for the reason that the heavy is placed underneath and the light on top, so that the foundations and the rocks are placed lowest and then the earthy matter, and lastly the wood above all because the lightest." Aristotle, however, defines the relation thus: the house though it cannot be *without* this material, yet is not made *for* this material, but rather for the shelter and protection of many people. This is the case with everything that has a purpose in itself; it does not exist without relation to what belongs to its nature as necessary thereto; but it does not exist on account of the requirements of the material, but rather on account of a final cause. The Necessary is, therefore, only as presupposition and not as final cause; the final cause lies in the ground [λόγῳ, cause or reason], while the necessary lies in the material. It is therefore clear that necessity in natural things is limited to matter and its movements; each [matter and final cause] is to be posited as a principle, but final cause is the higher principle." The principle of necessity must be present, but by itself it does not suffice to give itself occasion to act, but is itself restrained by external necessity. The principle of matter is thus inverted in the true moving ground of the final cause, which is the inversion [opposite] of this principle of necessity, and therefore the natural preserves itself in the final cause. Necessity is the objective manifestation of the activity of its moments as sundered; as in the Chemical the essence of the two extremes, base and acid, is the necessity of their relation.

What we have given is the chief idea of the Aristotelian Physics. The remaining parts of the treatise relate to the ideas of different objects in nature, a task for Speculative

Philosophy involving the consideration of those subjects mentioned at the beginning of this chapter. Aristotle leaves on these subjects many deep and difficult speculations. He first proceeds to the subject of motion (κίνησις) and says: it is necessary that a Philosophy of Nature treat of this, but it is hard to comprehend; in fact, it is one of the most difficult of ideas. Aristotle then discusses motion in general, not merely motion in time and space, but also the real motion [i. e. self-motion]: he defines it as the "activity of a thing existing according to possibility so far forth as it is such." This he explains as follows: "Metal is the possibility of a statue; but the movement requisite to become a statue is not a movement of the metal *as metal*, but rather a motion of the same *as possibility of becoming the statue.* On this account, this activity is an imperfect (ἀτελής) one, i. e. it is not "self-end"; "for the merely potential, whose activity is motion, is imperfect." The absolute substance, the unmoved mover, which is the existing cause of the celestial movements, and which we lately considered as final cause, is, on the contrary, both the activity itself and the content and object of the activity. From this, however, Aristotle distinguishes that which falls under the form of antithesis: "The mover is also moved when it possesses motion as a [mere] potentialty and its not-motion is rest. That in which motion takes place possesses not-motion as rest; for the activity of that which is at rest is motion": rest is, namely, potentiality to be moved. "For this reason movement is the activity of the movable (κινητοῦ),* in so far as it is movable; this, however, happens through contact with a mover (κινητικοῦ), so that the former [the movable] is passive. But the mover always introduces a sort of final cause (εἶδος), either a what (τόδε), or a quality, or a quantity, which is the principle and cause of the motion when it moves anything; for example, the man existing according to activity produces a man from the potentially existing man. In this way, therefore, is movement

*Note by Professor Michelet, the German editor.*—"Aristotle distinguishes four determinations: (1) the moved potentially, or the movable (κινητόν); (2) the moved actually (κινούμενον); (2) the potential mover (κινητικόν), which Hegel calls further on "*das Bewegliche*"; (4) the actual mover (κινούν); it were, perhaps better to translate κινητόν by *Beweglich*, and κινητικόν by *Bewegerisch.*"

in the movable; for it is an activity thereof, and this activity proceeds from the potential mover; and the activity of the potential mover is no other [than that of the movable, i. e. there is one activity to both], the activity involves both [mover and movable]. The potential mover is the activity as potential, the actually moving mover is the same in activity: but it is the active impulse of the movable (ἔστιν ἐνεργητικὸν τοῦ κινητοῦ), so that there is only one activity to both; just as the relation of one to two and of two to one is the same —or just as the stairs are ascent and descent at the same time, and the way from Athens to Thebes is the same as the way from Thebes to Athens. Thus activity and passivity are not originally (κυρίως) the same, but are the same in movement. According to being (τῷ εἶναι) they are identical; but the activity in so far as it is an activity of this *in* this [i. e. in the moved], and the activity of this *by* this [by the actual mover], differ in idea (τῷ λόγῳ)". Aristotle next discusses the Infinite (Phys. III. 4–8).

Aristotle then speaks of place (Phys. IV. 1–5): "It is likewise necessary that the physicist investigate the idea of location (τόπος)"; here appear many different determinations; among them are *space* in general and definite space, or *place*. "Is space a body? No; for in that case two bodies [the body and its place] would be in one and the same place. Moreover, if it were the place and location (χώρα) of *this* particular body, it were evidently that of the surface and other limits; but the same reasoning could be brought up for the opposite, since where before the surface of the water was, now might be that of the air," —thus the two surfaces have the same place. In truth, however, there is no difference between a point and its place; and so, too, place is not different from other forms of limit, nor is it something external to them. It is not an element, nor does it consist either of corporeal or of incorporeal elements; for it has magnitude, but nothing corporeal. The elements of bodies are corporeal, for no magnitude can originate from mere intelligible elements. Place is not the matter of things, for nothing consists of mere place; neither is place the form, or the idea, or the final cause, or the moving cause; and yet is something." Aristotle then defines location to be the first unmoved limit of what includes;

it includes bodies whose place it is, and to it pertains nothing of the thing it includes; yet it is coextensive with the object since the limits and the limited are together [coextensive]. The extreme ends of the including and the included are identical, and hence also both limits are the same; but they are not limits of the same, for the *form* is the limit of the object, and the place that of the including body. Place as the including remains in unchanging rest while the object is removed; it is, therefore, separable from it. In other words, Place is, according to Aristotle, the limit, the negative of a body, the positing of difference, of discreteness; but it likewise belongs to the including body as well as to the included: hence there is no difference there, but unchangeable continuity prevails [the limit is the connecting and identity as well as the separating and negating]. "Place is either the universal (κοινός), in which all bodies are" (the celestial space); "or the particular (ἴδιος), in which they are as in their origin." Aristotle speaks also of above and below in space, relating the same to the celestial regions as the containing, and the earth as the lowest: "In space there is a body outside of which is an including body. The entire heavens is not in a place, for no body includes it. There is nothing external to the universe, all is contained in the heavens; for the world is the whole. But place is not the heavens; it is only the outermost limits at rest which touch moving bodies. Therefore the earth is in water, the water in air, the air in ether, the ether in the heavens."

From this Aristotle (Phys. IV. 6–7) proceeds to consider empty space,—an old question upon which physicists of our day cannot agree: but it is all the same to them whether there is any thought in existence or not, or whether or not Aristotle ever studied the question. "The void is, according to the common notions of men, a space wherein there is no body. And since they take the corporeal for the existent, they call empty space that wherein nothing exists. The assumption of an empty space has its reason chiefly in the fact that a void [the negation of an existing mode of being] must be posited as the necessary condition of movement; "for a body cannot move in a *plenum*," there must be a void before it. "The other argument for the void is found in the elasticity of bodies,

which is possible through the existence of pores." This is that current notion that difference in density is to be explained through separation of the atoms, the difference in volume of two bodies of equal weight but of unequal size being due to the amount of void space between the atoms, the atoms being held to be all of equal size and weight. Aristotle refutes this explanation very neatly, and in a general form: "The plenum can be changed, and bodies can yield to each other even when no empty space separates them. Bodies, fluid as well as solid, are condensed not into the void, but through the expulsion of that which is contained in them, just in the same manner as air is expelled when water is compressed.

Aristotle speaks more profoundly on this subject when he combats the position that *the void is the cause of motion* (Phys. IV. 8). He shows that the void rather annuls motion, and that, accordingly, in the void there would be universal rest: the void is the perfect indifference into which a somewhat might move more or less; in the void all differences vanish. It is the pure negation, no object, no distinction: hence no ground or reason for standing still or for going further. But body is in motion, and it has thus distinctions; hence it has a positive relation and not to a mere nothing. On the other hand Aristotle refutes the other reason for the existence of a void, namely, that bodies yield. But one cannot establish a void in this way: there would not be one motion, but a motion in all directions—a general going to pieces, an absolute yielding, in which no coherence remained for the body. "Moreover, a weight or body is affected in its motion by two causes: the variation of the medium through which it moves, as air, water, or earth; or through its own constitution—having an excess, it may be, of weight or a deficiency of it." As regards the relation of motion to the density of the medium, Aristotle says: "The medium through which the body moves is a cause in so far as it retards—to the highest degree if it moves in the opposite direction (less if it is at rest) and is not easily divisible. To the variation of the specific gravity of the medium, air and water, the variation in velocity has the same relation; so that if the medium becomes twice as rare the velocity doubles. The void has no such relation to body, however, as if the latter were specifi-

cally heavier. Body exceeds the void in magnitude just as little as the line does the point, when the line is no combination of points. The void has no relation to the plenum." As regards the other case, the difference between heavy and light, which should be considered, in bodies themselves: the former move swifter than the latter in the same space; "but this characteristic holds good only in the plenum, for the heavy body divides the plenum more rapidly by its force." This view is quite correct, and is directed chiefly against numerous ideas that prevail even at the present day. The idea of like movement of heavy and light, as well as those of pure gravity, pure weight, pure matter, is an abstraction referring the difference to the accidental resistance of the air.

Aristotle comes (Phys. IV. 9) now to the *second* point, the assertion of the void against the distinction of specific gravity. "Many suppose the void to exist because of the existence of loose and firm bodies": the former is to be a porous body and the latter to be a perfectly continuous one; or they are distinguished from each other (still quantitatively) through greater or less density. "If, namely, a mass of water becomes air, then a certain amount of water must give a mass of air of like magnitude, or else there must be a void space; for only through this are condensation and rarification conceivable. If now, as they say, the less dense were that which is separated by many void spaces, since the void cannot be divided any more than space can have intervals, [in which there is no space,] nothing could be condensed. If, however, it is not divisible, and there still should be something void in the body, then, in the first place, there will be posited only upward movement; for the less dense is the light, and on this account they say also that fire is rare," i.e. because it always moves upward. "Then the void cannot be the cause of motion, because in it something is moved, just as in hose which carry up what is attached to them. But how were it possible that the void should move itself, or that there were a location for the void? For the place from which it moved would be the void of the void. At all events as there can take place no motion in the void, so also the void cannot be moved." Aristotle establishes the true nature of the object in opposition to these ideas, and everywhere sets up the ideal view of

nature: "That the contraries heat and cold and the other physical contraries have one and the same matter, and that from what exists potentially there arises what exists actually; and that matter is not divisible when it has the attributes of the idea,—and that it remains one and the same as regards number when it obtains color, heat, and cold. Likewise the matter of a small body is the same as that of a great one, since from a smaller a greater one is easily made and *vice versa*. If air is made from water, expansion occurs; the matter remains the same, however, without addition: but what it is potentially, it becomes actually. So likewise if a large volume of air is compressed there arises the opposite of the result before mentioned, and air becomes water, since the material of the two is potentially the same." Aristotle also asserts that the increase and diminution of heat and its transition to cold is no addition or withdrawal of caloric matter; also that dense and rare are one and the same. These ideas are very different from those entertained by physicists, who are prone to explain all variations of the kind by addition of matter, and to consider specific gravity as owing to the number of atoms a body contains. Aristotle, quite the contrary, takes this all dynamically—using the word in a sense very different from that current at the present day, namely as a synonym for intensity or degree;—he posits intensity in its correct sense of general potentiality. The difference must, of course, be still one of magnitude, but not as an increase or diminution, or as a change of the absolute mass of matter. But intensity means here *force*, and this again not in the sense of an abstract entity separated from matter; but in such a manner that if something becomes more intensive, its actuality has been diminished, but its potentiality increased. It is then indifferent whether greater intensity or greater extension is posited: a larger volume of air can be warmed to a given degree as well as a smaller volume, provided the heat is more intense; or the same volume of air can be heated to a more intense degree by that means.

"In the investigation of Time, Aristotle remarks (Phys. IV. 10–11, 13) that if one considers it externally (ἐξωτερικῶς) one must arrive at the conjecture (διαπορῆσαι) that time has no being, or it must be scarcely less (μόλις καὶ ἀμυδρῶς) than a

mere possibility. "For one side of time has been and is not, the other will be and is not; of these two sides, however, the infinite and ever-existent (ἀεὶ λαμβανόμενος) time consists. Now, however, it seems as though time were impossible if it consists of that which is not. For of each thing that is divisible, if it exists, some or all its parts must be. Time is now, indeed, divisible; some parts, however, are past, some will be, and there is no part present. The NOW is not simply a part: for a part has a measure, and the whole must consist of parts; time, however, does not consist of Nows." Because the Now is indivisible, it has no quantitative determination which could be measured. "Likewise, it is not easy to distinguish whether the Now abides the same, or is another and another forever. Moreover, time is no movement and change; for movement and change exist in a thing that is moved or changed. But time is the same everywhere. Change and movement is also slower or swifter, but time *not*. It is, however, not without change and movement" (which is nothing but the moment of pure negativity in the same): for where we perceive no change, there seems to be no time,—as in sleep. It is hence in movement, but is not it itself." Aristotle defines it thus: "We say then that time is, if we mark the before and after in motion; these are determined in such a manner that we take them for another and another, and between them again another as middle. If we now think the two extremes of the syllogism as another than the middle, and the soul speaks of the Now as two, the one the previous, the other the following; then we say, this is time. Whatever is determined by the Now we call therefore time; and that is the fundamental characteristic. But if we perceive the Now as one, and not as the before and after in motion, nor as the identity of something earlier and later, there then seems to us to have been no time because no motion. Time is therefore the number [measure] of movement in respect of the before and after; it is not movement itself, but it exists in so far as movement has number. The measure of more or less is through number, but that of the greater or less motion is time. But we call number as well that which is counted as that with which we count; time, however, is not number with which we count, but which is counted, and like motion is always another. The

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Now is what the unity of number is, and measures time. The whole time is the same; for the Now which was is the same as the present (the universality as extinct "Now"), but in respect of being it is another. Time is, therefore, through the Now, as well continuous (*συνεχής*) as discrete (*διῃρημένα*). Through this it resembles the point: for it, too, is the continuity and discreteness of the line—its principle and its limit; but the Now is no abiding point. As continuity of time the Now unites the past and the future; but it likewise divides the time potentially,"—the Now is only divisibility and the moments are only ideal, "and in so far as it is a given one it is always another; it is, however, in so far as it connects, directly always one and the same. Likewise in so far as we divide the line, there arise for our thought other and again other points; in so far, however, as it is one, it is only one point. Hence the Now is in part the division of time potentially, partly the limit and unity of both," namely, of the fore and after. The universally dividing point is as actual only one; but this actual one is not a one at rest, but ever and again another, so that the individuality possesses universality ss its negativity. "For the division and the union are the same, and according to one and the same; its idea (*τὸ εἶναι*) is, however, a different one. In one and the same respects are immediately absolute opposites posited as existing. In space, conversely, the moments are not posited as *existing*, but in it first appears this being and its movement and contradiction. The principle of identity set up by the understanding is therefore not at all the highest principle, according to Aristotle; but identity and non-identity is according to him one and the same. Since the Now is only now, the past and future are different from it: but they are likewise necessarily connected in the Now, which is not without fore and after; hence they are in one, and the Now as their limit is just as well their union as their distinction.

Aristotle (Phys. V. 1) proceeds to the consideration of the realized movement in things, to CHANGE (*μεταβολή*) or to the PHYSICAL PROCESSES — our consideration having been previously the pure movement. "In movement there is a mover and a moved, and a 'wherein' or time: besides this, a 'whence' and a 'whither.'" "For all movement is from something and

to something; but the first moved and the 'whither' and 'whence' it is moved are different: for example, *wood*, *heat*, and *cold*. The motion is in the wood, and not in the form; for the form moves not nor is moved,—neither do place or magnitude: but" (in the order as they follow) "they [form, place, and magnitude] are moved, and mover, and the goal of of the motion. That is called change which is rather the 'whither' than the 'whence.' Therefore also the ceasing in nought is called change, although that which ceases changes from being: and the origination of a thing is called change into the existent, though it be from non-existence." This remark is intended to signify that the relation of "whither" enters first in the real-becoming movement, i. e. in CHANGE proper; while the relation "whence" is that wherein change is still the mere ideal of motion. Besides this first form of distinction between movement and change, Aristotle adduces another, when he comes to classify change into three kinds, to wit: (1) change from a subject (ἐξ ὑποκειμένου) into a subject; (2) from a subject into a non-subject; (3) from a non-subject into a subject." The fourth, namely, "from a non-subject into a non-subject," which might be suggested by the mode of the general division, is no change; for it contains no contrast." It can indeed be thought as ideal, but Aristotle has reference to the actual phenomenon. "That from a non-subject to a subject is production (γένεσις); that from a subject to a non-subject is decay (φθορά); that from one subject to another is motion proper," because the subject in transition remains the same, and there is no becoming-other [alteration] of the actual, but a merely formal becoming-other [alteration]. This contrast of materialized movement as change to merely formal movement is worthy of note.

Aristotle comes in his sixth book to the consideration of the Zenonian dialectic relating to movement and change, namely, to the infinite divisibility. Aristotle solves it in this general way: it is shown to be nothing but the contradiction formed by the self-opposition of the Universal; the unity in which the moments are cancelled is not a nothing, (in which case the movement and change would not be,) but a negative universal, in which the negative is posited as affirmative again; this is the idea of divisibility.

Of the further details into which Aristotle goes I will quote only the following. Against the doctrine of atoms and their movement he remarks (Phys. VI. 10) that the indivisible has no movement and change; which is used to disprove that Zenonian proposition that there is only simple indivisible being and no movement. For as Zeno argues from the indivisibility of the atom against movement, so Aristotle argues from movement against the atom: "all that moves or changes is in the first part of time here, and in the last there. The atom as simple, indivisible being, however, cannot occupy two points of space, because it would be divisible in that case. The indivisible could thus be moved only on condition that time consisted of Nows; that this is impossible we have already proved." Thus, since the atoms have no change in them, and cannot have it from without through contact, &c., they are entirely without truth.

Next the pure ideality of change is an important point. Aristotle (Phys. VII. 3) says on this: "That which is changed is only the sensuously perceivable (*αἰσθητόν*); and the forms and shapes, as well as the properties are not changed: they originate and vanish in things, but do not change." In other words: the content of change is unchangeable; change as such belongs to the mere form. "Virtues or vices belong, for example, to accomplishments. Virtue is the perfection (*τελείωσις*) through which something has attained the aim of its nature; vice, on the other hand, is the failure and non-attainment of the same. They are not changes; but they begin and cease only when something changes." That is to say, the distinction becomes one of being and non-being, a merely sensuous distinction.

From these ideas Aristotle (Phys. VIII. 6, 8–9; De Cœlo, I. 4) comes to the first real or physically existent motion: the first principle of motion is itself unmoved. An infinite straight-lined motion is an empty abstraction; for motion is necessarily a tendency to something. The absolute motion is a circular motion, because it is without antithesis. For since motion is to be considered in relation to its starting point and to its final cause, it is evident that the directions from A to B and from B to A in the straight line motion are opposed; but in circular motion they are the same. The idea that the celestial bodies would move for themselves in straight lines, if

they had not chanced to come into the sun's sphere of attraction, is an empty opinion far removed from the thoughts of Aristotle.

Aristotle shows next (De Cœlo, II. 1; I. 3) that the entire heavens neither originated nor is capable of ceasing, but is one and eternal: it has neither beginning nor end in eternal time, but contains infinite time in itself." All other ideas which are used to predicate of essence are sensuous; and in them there is always contained precisely what they meant to exclude. If they, namely, posit the void as existing before the commencement of all origination; in reality this very void is nothing else than the quiescent self-identity, i. e. the *eternal matter* which is thus already posited before the origin; for they would not say that before the origin there was nought. In fact, however, something first IS in its origination, i. e. movement is necessary to the existence of something; and where reality is, is movement. But they do not bring together that void, the self-identical unoriginated matter, and this nothing. "That which has this absolute, circular motion, is neither heavy nor light; for the heavy is that which falls and the light that which rises." In modern physics, on the contrary, the celestial bodies are held to possess gravity, and would fall into the sun, but do not do it by reason of another force. "It is indestructible and uncreated, without increase or diminution, without any change. It is different from earth, fire, air, and water; it is what the ancients called ether, as existing in the highest regions, continually running its course (ἀεὶ θεῖν) in infinite time. This ether seems to be the eternal matter, but is not expressed definitely as such, and it remains fixed like our idea of the heavens. Here we begin to find the juxtaposition of different ideas hold more and more sway over their proper subordination.

Aristotle (De Cœlo, III. 6) shows further, that the elements do not arise from one body but from each other; for in their origin they spring either from an incorporeal source or from a body. In the first case they would arise from the void, for that is the immediate incorporeal; in that case the void would have to exist for itself as that in which definite corporeal existence takes its origin. But the elements, according to the supposition, do not spring from what is corporeal; otherwise

there would be a corporeal element existing before its elements. Hence the conclusion remains that the elements sprang one from another. Upon this it is to be remarked, that Aristotle understands by "origin" *actual* origin,—not the transition from the generic to the individual, but the origin of a determined corporeal, not from its ground, but from contraries as such. Aristotle does not consider the Universal as possessing the negative in itself; otherwise the Universal would be precisely the absolute matter whose universality as negativity is *posited*, or *real*.

Further on, Aristotle comes (De Cœlo, IV. 1–5) also to a kind of deduction of the elements, something very remarkable. He shows that there must be four of them in the following order, since he proceeds from the fundamental determination of heavy and light, which we call attraction and centrifugal force. The corporeal, says he, is according to its motion either light or heavy; and this is not merely relatively the case, but absolutely so. The relatively light and heavy is that which with equal volume will fall slower or quicker. The absolute lightness goes up to the extreme parts of the heavens, while absolute heaviness descends below to the centre. These extremes are fire and earth. Between these are intermediate elements which stand in similar relation to each other; and these are air and water, of which the one is heavy and the other light, though relatively so. Water, namely, pervades under all except earth, and air *over* all except fire. "On this account," infers Aristotle, "there exist these four matters; but four matters in such a way that they have one in common,—particularly since they arise one from another, their being is another than they." Yet Aristotle does not characterize the ether before mentioned as the common matter. Upon this it should be remarked here, that although these fundamental determinations are far from exhaustive, yet Aristotle has gone much further in the investigation of this subject than the moderns: he did not hold at all that idea of the elements which is current in modern times; according to that idea, the elements are simple and indestructible. Snch a simple determinateness of what is existent is however an abstraction and has no reality, for, as defined, it would be incapable of motion and change; but an

element must also have reality itself, and is therefore, as unity of opposites, dissoluble. Aristotle lets the elements therefore, as we have already seen, arise one from the other, and pass over into each other: this is quite opposed to our physics, which understands by elements only what is simple and indestructible and self-identical. For this reason they are wonderfully wise when they upbraid us for holding water, air, &c., for elements! Moreover, modern physicists have never been able to comprehend the expression "neutrality" as a universality comprehended as unity, just as Aristotle ascribes it to the elements; in fact, however, an acid combined with a base is throughout nothing more (as they assert) than such [a neutrality] in this connection. But Aristotle is far from thinking "simplicity" in the sense of a mere abstraction, and he is just as little given to acknowledging the truth of that barren abstraction, the idea of composition from parts. On the contrary, he contends against it energetically, e. g. in his remarks in relation to Anaxagoras (De Cœl. III. 4).

I will now adduce the moments of the REAL PROCESS in relation to motion as Aristotle treats them (De gen. et corr. II. 2–4) before finally passing over to the "Principles of tangible body": here we see the elements in their processes, while before we saw them in their quiescent determinateness. Aristotle excludes those relations which exist only for sight, smell, &c.; and prefers to them those that exist for the sense that perceives the heavy and light. As these fundamental determinations he adduces heat and cold, dry and moist; they constitute the difference-for-others perceptible to sensation, while heavy and light are properties pertaining to the difference-for-themselves. In order to prepare the way for the transition from the elements to their sensible relations, Aristotle says: "For the reason that there are four principles—and four things have in reality six relations to each other, but the opposites cannot here be united (dry with moist, and warm not with the cold),—therefore there are four combinations of these principles, (1) warm and dry, (2) warm and moist, (3) cold and moist, and (4) cold and dry,—and these combinations follow those primary elements; so that fire is warm and dry, air warm and moist (vapor), water cold and moist, earth cold and dry." Next, Aristotle endeavors to

make the reciprocal change of elements into each other conceivable in this manner: the beginning and ceasing go from one extreme into the opposite. All elements have an antithetic relation to each other; each is the non-being of the other, and one is distinguishable from another through the predicates of actuality and potentiality. Among these some have a part in common; e.g. fire and air have heat; if, therefore, in fire the dryness be overcome through moisture, then from *fire* arises *air*. But with those which have nothing in common with each other, as *earth*, which is cold and dry, or air, which is warm and moist, transformation goes on more slowly. The change of all elements into each other, the entire natural process, is to Aristotle therefore a circle of changes. This is unsatisfactory, for the reason that neither the individual elements are comprehended, nor do they round themselves to a whole.

In fact, Aristotle passes next over to meteorology precisely for this purpose, the consideration of the general process of nature [i. e. as a whole]. But we have here arrived at his limits. Here in the natural process this mode of simple defining as such ceases to hold good—this style of progressive determination fails to meet the wants of the subject, and loses its interest. For in the real process these defined and fixed ideas continually lose their signification, and become the very opposite of their definitions precisely where these indifferent links of the series condense and unite. In defining time and movement we saw Aristotle himself unite opposite determinations in this manner; but motion in its true character must take back into itself space and time; it must exhibit itself as the unity of these its real moments, and show how it contains them; i. e. show how this ideal comes to reality. Still more, however, is it necessary to show how the successive moments, moisture, heat, &c., are subsumed under processes. But the sensuous phenomenon begins here to gain the upper hand; for the empirical falls asunder like Nature into individualized forms. The empirical phenomenon so grows upon the observer, that he can impress upon it here and there only the sign of his taking possession thereof by thought, but it can never be thoroughly penetrated, as time, space, and motion have been, since it withdraws from the ideal further and further.

## THE PHILOSOPHY OF NATURE.

(COMMENTARY ON THE FOREGOING ARTICLE.)

The exposition of Aristotle's Philosophy of Nature by Hegel, which is given in this number of the Journal in a stiff and literal translation, will perhaps excite some curiosity as to its standpoint and bearing. Its presuppositions are so different from those current in our day, that we have no expectation that either Aristotle or Hegel will make much impression in this province. In spiritual things—such matters, for instance, as were treated in the exposition of the "Metaphysics" given in our last number—it is fair to suppose that a large number saw, or might have seen, many deep thoughts to repay them for the labor of reading and studying that article. But that there should be any speculative explanation of nature, this does not seem possible to other than the few.

In order, however, that such readers as venture to try Aristotle in this number may have an article close at hand to serve as an antidote to its effects, we offer the following remarks:

I. The common opinion of those who attempt to read Hegel's Nature-Philosophy holds that he attempts to construct or deduce natural things by an *a priori* process, eschewing at the same time all induction. A moment's thought is sufficient to suggest this objection to such a procedure on the part of Hegel: suppose that he does deduce certain thought-determinations from abstract, *a priori* grounds, how can he identify these thought-determinations with natural determinations, so as to know and name what he has deduced? How, for example, when he has deduced the determinations *space*, *time*, or *motion*, does he know that these are properly called space, time, and motion, or that what he thinks under those names is what mankind have thus named? Can he do this without carefully collecting the empirical characteristics of these determinations from the ordinary consciousness, and then identifying them with his *a priori* ones by careful comparison? Of course he cannot: every one sees this at a glance. Supposing, then, that he *can* deduce determinations, there

are two other steps to the process of making a nature-philosophy, making three in all:

1. Deduction of the ideal determination.
2. Induction of the empirical characteristics of natural objects.
3. Identification of the natural object with the ideal determination.*

Such a process cannot properly be called deduction, for it involves likewise the process of induction, and Hegel must be unconscious of the presuppositions he makes if he professes to follow deduction and eschew induction. Does he profess anything of the kind? The reader of the third volume of his Logic does not need be told that Hegel merits almost exclusively among moderns the honor of having pointed out the exact force and relation of these processes, and their union in the total process. (*Werke*, B. V. s. 115–162.) In fact, a proper statement of Hegel's endeavors would be more nearly this: he attempts to comprehend the world of actuality, and to explain all things through it. He has first investigated the validity of all thoughts and ideas (i. e. pure thoughts) in his Logic. Then he comes to nature with the insight into the FIRST PRINCIPLE that leads him to look for certain realizations of those pure ideal forms. His great labor, however, lies in critically collecting and sifting the phenomena of nature, for he must correctly classify these phenomena according to the scale of concreteness and abstractness. He has no difficulty in seeing the extremes of contrast: there is the mechanical and the organic in opposition—clearly the organic is more concrete and has more of its phases real at once than the mechanical, which is *real* in only a few of its phases, and merely *potential* in most of them. There comes to view a middle province, that of Physics proper, wherein the abstractness of the mechanical is partly modified by the entrance of a unity, so that the contrasts stand in connection through a middle term; chemistry is the highest type of this middle province. The relation of acid and base realized in a salt is far more concrete than that of Space and Time in Motion; i. e. it includes the latter and many other determinations, while

* The reader will find an able exposition of this subject in Everett's Science of Thought (p. 169 *et seq.*), published in Boston by W. V. Spencer.

the latter does not include the former. The chemical relation is a better symbol of the organic than is the mechanical. In the mechanical, the unity is entirely outside or external (e. g. the gravity of a body to another outside of it), and is manifested in it only in external movement. In the physical there is more individuality manifested; the unity is partly internal, inasmuch as the elements in their antithesis exhibit it (the unity) as their essential quality. In the organic the unity becomes completely real; it controls as final cause the determinations which arise.

II. Whatever phenomena appear in nature have to be classified according to their general characteristics. The perception of these general characteristics is a process of identification and not of discovery. Induction is not, as a whole process, the operation it is generally supposed to be by those who talk of it most. It is not a pure passivity of the mind directed to finding simply what is given it from without. The inductive philosopher is engaged in the same threefold process that the speculative philosopher employs in his "nature-philosophy." There is no help for it. He may be unconscious, and perceive only one phase of his process. The ostrich attempts to hide from the hunter by thrusting his head into the sand. The inductive philosopher would escape from the *a priori* phase in his process by ignoring it and looking the other way. But when any very general result is reached, the activity of thought, which identifies the object with its own synthesis, becomes apparent enough. Indeed, to one who reflects on the nature of the syllogism, it is clear that any form of it involves, implicitly or explicitly, the same process, to wit: (1) the seizing and fixing of the empirical object, which involves (2) a classification or a free handling of the object by thought, the analysis and synthesis of ideas, which again involves (3) a process of pure or free thought wherein the genesis of ideas as categories takes place—unconsciously in most cases. Unless the inductive philosopher recognized the general principle, he would have no claim to be called a discoverer. But the activity of the mind is the same whether he defines the principle by limiting the generic term in pure thought, or limiting the same in the presence of the object. The identification must be the same; but the consciousness

of the process may be quite wanting in the one case, and hence the freedom involved in it not realized. The formation of an idea is always a free thought-process: the *maya* of the sense-activity makes us think that we are passive receivers of ideas when we are not such. To the *reality* of freedom must be added its *appearance* also. This is essential to the complete "liberation of the soul," as Kapila calls it.

III. Elsewhere another statement of this point has been made:*

"Deduction is no more speculative than Induction is. Both are defective, and have this peculiarity in common with all partial procedures: they each involve an unconscious procedure entirely the reverse of the conscious one which is named. How, for example, could one ever deduce anything without recognizing in the product something before familiar to him in some inductive shape or other? Let him follow out the strictest dialectical procedure, and commencing with the ultimate abstraction = Being (if he will); in this, what meaning soever he finds, implies other concepts; and since in the definition of his object he is carried beyond it, he calls this *deduction;* but the 'other concepts' involved in the first had to be identified and named: they had to be defined before he could call his procedure a progress at all. No deduction was possible, therefore, until he identified those concepts that arose to view with familiar names of concepts hitherto known to him empirically. The pure thinker, who saw the dialectical procedure without being able to recognize its results, would never be in a condition to describe it in words. Indeed, the mystics are those who see this movement of pure thought, but are so unacquainted with the scientific vocabulary of their language as not to identify the procedure under the conventional description; they therefore use concrete, sensuous expressions having analogies to the content they attempt to utter. In mystic philosophy, for this very reason, dependence upon the inductive factor is most apparent.

"Not less, however, is Deduction an unconscious factor in all Induction. The inductive process could never take the first step above the concrete material before it, except by the free process known in pure thought. Classification—indis-

* Jour. Spec. Phil., Vol. III., P. VI.

pensable to Induction—not only precedes generalization, but is the result of generalization. The act of induction seized as a whole is as creative as that of deduction. The inductive philosopher who knows nothing of the pure thought-movement by itself, is at all times half unconscious of his entire activity. With this unconsciousness comes the danger of mistaking one-sided abstractions for concrete laws. The speculative cognition contains both phases — the deductive and inductive; but not as distinct processes. The syllogism in which the Particular, the Individual, and the Universal, are—not successively, but simultaneously—the middle term, is no longer a mere syllogism, but is the form of 'knowing by wholes' of which Plato speaks."

Thus it is clear that the empirical element or phase enters even into Ontology, and that what consciousness has unconsciously produced (absurd as this may sound) through its own development is consciously developed and recognized in the science of Pure Thought.

IV. The reader may be interested to compare Hegel's arrangement of the details of Nature-Philosophy with that of Aristotle. In Hegel's Philosophy of Nature (Vol. II. of the Encyclopædia, 2d ed.) the subjects discussed are given in the following order:

I.—MECHANICS.

CHAPTER I.: MATHEMATICAL MECHANICS.

A. Space.
B. Time.
C. Unity of Time and Space: motion and matter.

CHAPTER II.: FINITE MECHANICS; GRAVITY.

A. Inertia.
B. External Impulse (*Stoss*).
C. Gravity.

CHAPTER III.: ASTRONOMY.

A. Universal Gravitation.
B. The Kepplerian Laws.
C. The Totality of the Solar System.

II.—PHYSICS.

CHAPTER I.: PHYSICS OF GENERAL INDIVIDUALITY.

A. The Free Physical Bodies (Sun, Planets, Moon, and Comets).

B. The Elements (Air, Fire, Water, and Earth).
C. Meteorology.

CHAPTER II.: PHYSICS OF PARTICULAR INDIVIDUALITY.

A. Specific Gravity.
B. Cohesion (Adhesion, Coherence, Elasticity).
C. Sound.
D. Heat.

CHAPTER III.: PHYSICS OF TOTAL INDIVIDUALITY.

A. Shape (Magnetism, &c.)
B. Particular Properties of Bodies.
    1. Relation to Light—Transparency, Refraction, Science of Colors.
    2. Properties of the Antithesis—Smell and Taste.
    3. Electricity.
C. Chemical Process (Galvanism, Salt-formation, Elective Affinity).

III.—ORGANICS.

CHAPTER I.: THE EARTH-ORGANISM.

A. History of the Earth.
B. Geology and Oryktognosy.
C. The Life of the Earth (Atmosphere, Sea, Land).

CHAPTER II.: THE PLANT.

A. Shaping-process (leaf and root, cell-structure, movement of the sap, &c.)
B. Process of Assimilation (with light, air, and water).
C. Sexual Process.

CHAPTER III.: THE ANIMAL.

A. Formation.
    1. Function of Organism.
    2. Systems of Formation (a. Nerve-system, including also the Osseous; b. Blood-system, including the Muscular, the Lungs and Liver, the Heart; c. The Digestive-system).
B. Assimilation.
    1. Theoretical Process.
    2. Practical Process (a. with light; b. breathing, perspiration, thirst; c. digestion).
    3. Instinct.
C. Sexual Process.
    1. Sexual relation.
    2. Zoölogy (a. Worms and Mollusks; b. Insects; c. Vertebrates—fishes, amphibia, birds, mammals).
    3. Medicine (a. Nosology; b. Therapy; c. Death of the individual).

Under the last topic (Death of the individual) is given briefly Hegel's doctrine of the nature of physical death, and the compass of its effects. Its connection with the diremption of sex excludes it from the life of the mind, and hence conscious being is immortal. The neglect of careful study of this last chapter of the Philosophy of Nature, and the transition contained therein to the Philosophy of Mind, has led to much misapprehension of Hegel's doctrine on this point. It is not Hegel's fault, however. (On the top of page 107, Vol. IV., Jour. Spec. Phil., we state briefly this doctrine of Hegel as we have seen it by the aid of Hegel's remarks in the chapter before mentioned.)

V. The crusade against technical words continues still. People are frequently saying: "If you would only give your thoughts in common language, it would be so much easier to understand you." With all seriousness, these people are radically mistaken. If speculative thoughts were crowded into "common language," they would of course appear like common thoughts, if the expression means anything. For what is wanted is, easily comprehended thoughts. Now, suppose a deep and true thought were so expressed, in common language, as to seem a trite remark or a truism: common-place thinkers would slide over it smoothly, and see no deep thought at all; while a few deep thinkers, on the alert, might catch the subtle under-meaning. If, on the contrary, the thought preserves a technical expression, the easy, common-place thinker receives a severe shock when he comes upon it, and is not left in a state of doubt whether he understands it or not. He sees at once that he does not "make sense" of it. If he is simple and sincere, and withal possessed of humility, he will summon his powers, and, by hard thinking, master the passage. He will be rewarded by the consciousness of added power which increased insight gives. But if he is conceited and vain, it is likely that he will accuse the author of obscurity and confusion of thoughts.

These remarks find their illustration in translations of Aristotle. In some cases the translators have worked with the assurance that what they could not readily understand, with their limited culture of thought, was due to some clumsiness of Aristotle in expressing himself, or else to the fact

that "here, the text is very corrupt." They have accordingly taken the liberty to translate freely, into "good, easy English," whatever they have undertaken. The consequence is that the reader finds in their translations nothing deep, nothing new; and he goes on from page to page, wondering why Aristotle has been called the profoundest of philosophers—"the father of those that know"—and is tempted to think that what was great for the heathen Greeks, and the semi-civilized people of the dark ages, is very trite and trivial for men in this "enlightened age." The effect of such self-gratulation is indeed pitiable. Growth can be expected only from the conjunction in the mind of profound humiliation and most intense aspiration. The scholar should gird himself for work anew after each successfully completed labor, just as if he had to climb the new ascent from the base; he must begin as if he knew nothing, and had all to learn. In this way he moves on solidly, and is not hampered by presuppositions.

This frame of mind is above all necessary in the study of Nature. The trouble lies mainly in the fact that people too readily swallow certain labelled results, without independent examination of their grounds. These labels are in very frequent use. "The cause of this is electricity," says the professor. Everybody understands what is meant by the predicate, "electricity," does he? It is worse with such predicates as *gravity*, *cohesion*, *affinity*, *light*, *heat*, *motion*, etc. These labels are wrapped around certain syntheses of natural phases, and the whole is then used as if it were a simple, well-known object. The consequence is that self-deception prevails generally among those who write or talk on these themes. If these labels or technical terms are used with anything like an adequate sense of their meaning—i. e. of the phases and relations synthetically united under these technical terms—common-place readers get shocked in the way we have described.

Accuracy is indispensable; the precision must be infinite; definitions must therefore be exhaustive. The strength of mind is tried by this closeness of defining. To adapt a scientific work to popular (i. e. common-place or weak and undeveloped) minds, it is, therefore, requisite to leave out

definitions, or at least to relax their severity. This process at once takes away the very thing which forms the end and aim of the study proposed. What we wish to do is to bring up the mind to that strength of grasp that enables it to deal with the wide syntheses in a competent manner; not to drag down and mince up the object to fit it for the narrow and undeveloped intellect.

VI. Of the discussions in the article of Hegel on Aristotle's Philosophy of Nature, the most important is that of the ideas of Necessity and Adaptation—or *causæ efficientes* as opposed to *causæ finales*. This distinction is a vital one; and the thinker who cannot transcend the category of efficient cause, and find it to be conditioned on a deeper principle—that of "sufficient reason," or final cause—has by no means arrived at speculative thinking. Through this insight one arrives at the doctrine of the *causa sui* (self-mover) and of freedom; all on the hither side is necessity and fatalism.

The discussions of time, space and motion, as ideal and as real processes, together with the limitation of bodies and places, as explained through them, are of the highest philosophical interest; and one will find in Hegel's *Natur-Philosophie* a fuller exposition of the same determinations.

The categories of Potentiality and Actuality, as used by Aristotle, have deep significance; this is more apparent in the Philosophy of Nature, where so much is only potential.

The doctrine of the four elements—earth, air, fire and water—seems grotesque enough, especially in the light of our modern chemical discoveries regarding the sixty simple elements. But with the advance of our studies in meteorology, it is not certain that the doctrine of the four elements may not come again into favor at no distant day. At least a hint of a deeper meaning in that old doctrine could be found in considering the four elements to be the solid, the liquid, the gaseous fluid, the ether, instead of definite natural elements.

The advance of studies in biology will gradually bring our physicists back to *final causes*, and then the Philosophy of Nature and that of Mind will harmonize.

## PHILOSOPHY IN EUROPE.

*Berkeley.*

In a former number we spoke of Philosophy in Italy, and of the newly-established philosophical journal there. Recent letters from Dr. Collyns Simon assure us there is a prospect of the early establishment of another philosophical journal, edited by Professors Spaventa and Fiorentini. Meanwhile the first named journal continues to appear, and to increase in interest. In the last two numbers Dr. Collyns Simon has a lengthy discussion of the subject of the freedom of the will: "Upon the Impossibility of the Human Will and upon other Materialistic Hypotheses, a letter by T. Collyns Simon, LL.D., to Dr. Herzen, author of 'The Physiological Analysis of the Free Will in Man.'" The persistent activity which makes the tour of Europe and by personal interviews with the philosophers—by numerous and lengthy letters—and finally by long disputations, written at one time in English, at another in German, and again in Italian, seeks to spread the knowledge and influence of the Berkeleyan doctrines, is a spectacle to arouse exertions among the most sluggish ones. Dr. Simon has the soul of a crusader. The recent edition of Berkeley's complete works under the editorship of Professor Fraser, will no doubt lead to renewed study of that great man. We have before us a published letter of Dr. J. H. Stirling, wherein he defines his position toward Berkeley, saying among other things: "To my mind Berkeleyanism is to philosophy what Sangradoism is to medicine. As bleeding and warm water constitutes the whole art of the one, so 'without is within, for without is sensation, and sensation is within,' constitutes the whole theory of Berkeley." "Again, it is very wrong to call this idealism: Berkeleyanism is a *sensational* philosophy, and in a certain sense the most sensational of all philosophies"—"it is, in fact, the complete *negation* of philosophy." "Philosophy is the reduction of the whole of man's world to terms of thought, with theoretical light and practical guidance in all that concerns him as a rational animal."

The translation of Berkeley's Principles of Human Knowledge into German, by Professor Dr. Friedrich Ueberweg of

Königsberg—a translation published in that excellent and widely circulating series, Kirchmann's "Philosophische Bibliothek," has proved the occasion of numerous articles offensive and defensive. Dr. Simon has participated in the discussion. In the fifty-sixth volume of the Journal for Philosophy and Philosophical Criticism, published at Halle (in 1869) a letter appeared with the title which we translate: "On Immaterialism: a letter to Mr. Collyns Simon; by Prof. Dr. Freiherrn v. Reichlin-Meldegg in Heidelberg." In 1869, Prof. Dr. Ueberweg had already taken grounds against Berkeley's views, and in particular against Dr. Simon's exposition of them, in an article in Vol. 55, Jour. for Phil. and Phil. Crit., headed: "Is Berkeley's Doctrine Scientifically Irrefutable?" Dr. Reichlin-Meldegg's letter criticises the doctrine upheld by Berkeley, from much the same point of view as Dr. Ueberweg. In Vol. 57 of the same journal, Dr. Simon appears with a double letter, in the first part addressed in reply to Dr. Ueberweg, and the second to Dr. Reichlin-Meldegg. Remarks are appended to this letter by Prof. Dr. Ulrici, who gives his view of the reasons why Berkeley's theory has found so little sympathy among philosophers and thinkers at large. He thinks it is owing to the fact that it has no claims over the ordinary mode of view. "It treats of the origin of our ideas from so-called 'things.' What the common consciousness calls real, material things, and regards as the mediating causes or agents of our perceptions and ideas, Berkeley calls divine ideas, or representations, through which God communicates thoughts to us; by means of which, therefore, our ideas of things originate." "The common mode of view may not be able to explain *how* ideas arise through the action of matter on matter," etc.; "but Berkeley is not able any more to show how the divine objective ideas become to us subjective perceptions," etc. In the first number of the same journal for the current year, the strictures of Dr. Ulrici are answered by Prof. Dr. Hoppe, in an article entitled: "What Claims Berkeley's View has over the Ordinary View." In Volume IV. of Bergmann's *Philosophische Monatshefte*, he had already anticipated this point, in a criticism on Dr. Ueberweg's position. Dr. Ulrici, in his rejoinder, quotes from the "Principles of Human Knowledge" a passage which he asserts to be quite

in accord with his own statements: "It is evident, to any one who takes a survey of the objects of human knowledge, that they are either ideas actually imprinted on the senses, or else such as are perceived by attending to the passions and operations of the mind, or, lastly, ideas formed by help of memory and imagination, either compounding, dividing or barely representing those originally perceived in the aforesaid ways." The "ideas actually imprinted on the senses," says Dr. Ulrici, "are the ideas of *things*, and to be distinguished from those other species of ideas spoken of by Berkeley in this passage."

### *Philosophical Periodicals in Germany.*

In speaking of Dr. Simon's agitation of the Berkeleyan question we have alluded to the two Philosophical journals published in Germany; a further mention of them may be acceptable to our readers.

I.

The Journal for Philosophy and Philosophical Criticism, edited by Dr. J. H. v. Fichte (Professor of Philosophy at Stuttgart, and son of J. G. Fichte, the author of the Science of Knowledge, &c.), Dr. Hermann Ulrici (Professor of Philosophy in the University of Halle), Dr. J. H. Wirth (Evangelical Preacher at Winnenden), together with an association of learned men, is published at Halle, and is at present (1871) in its fifty-eighth volume. Each volume appears in two numbers, and occasionally there are two volumes a year. To give some idea of the publication, we translate the table of contents of the volumes before us:

*Volume 54.*—Art. I. The Opposition between Philosophy and History—*G. Mehring.* II. Studies in Morphology—*Dr. Adolph Zeising.* III. Relation of the Platonic Idea of God to the Idea of the Good—*Dr. Karl Stumpf.* IV. New Facts Relating to the Life and Doctrines of Giordano Bruno—*Moritz Carrière.* V. Philosophy in Italy since 1815—*F. Bonatelli.* VI. Book Notices.

*Volume 55.*—Art. 1. On the Logical Question—*H. Ulrici.* II. Is Berkeley's Doctrine scientifically Irrefutable?—*Dr. F. Ueberweg.* III. Book Notices.

*Volume 56.* — Art. I. On the Logical Question — *H. Ulrici.* II. Soul, Spirit, and Consciousness, from the stand-point of Psychophysics — *J. H. v. Fichte.* III. Historical Development and Significance of Kant's Critique of Rational Psychology — *Dr. Rudolph Hippenmeyer.* IV. Leibnitz and Lessing, a Study; by Dr. R. Zimmermann — *Dr. Arthur Richter.* V. Elements of Philosophical Ethics; by Dr. Schmid — *J. U. Wirth.* VI. Religion, its Nature and History; by Otto Pfleiderer — *J. U. Wirth.* VII. Reply to the Criticism of my Philosophy of Unconsciousness, by Prof. Reichlin-Meldegg — *E. v. Hartmann.* VIII. Answer to the foregoing — *Dr. Reichlin-Meldegg.* IX. On the Logical Question (with reference to the Writings of Trendelenburg, George, Kuno Fischer, and Ueberweg) — *H. Ulrici.* X. Immaterialism: a Letter to Mr. Collyns Simon — *Dr. Reichlin-Meldegg.* XI. Book Notices.

*Volume 57.* — Art. I. On the Basis of a Concrete Theism — *J. H. v. Fichte.* II. On the Opposition between "*Methodikern und Genetikern*," and its Mediation by the Aid of the Problem of the Order of Plato's Writings — *F. Ueberweg.* III. Reply to the foregoing — *H. Ulrici.* IV. The Doctrine of Berkeley — *Collyns Simon.* V. Reply to the foregoing — *H. Ulrici.* VI. System of Logic, together with an Introduction to Philosophy for the Use of Academies and for Self-instruction; by Dr. K. A. F. v. Reichlin-Meldegg — *Dr. Ueberweg.* VII. The Journal of Speculative Philosophy, edited by Wm. T. Harris, Vols. III. and IV. — *H. Ulrici.* VIII. Schleiermacher's Philosophical Theology — *Dr. W. Bender.* IX. Spinoziana — *Dr. Ed. Böhmer.* X. W. Dilthey: Life of Schleiermacher — *Dr. E. Sigwart.* XI. The Natural Law of the Soul; by E. F. Wyneken. XII. Elements of Æsthetics, Morals, and Education; by F. A. v. Hartsen. XIII. Psychological Experiments; by F. A. v. Hartsen — *C. Niesen.* XIV. The Ambiguity of the Copula in Stuart Mill's Writings; by M. Jordan. XV. On Berkeley's Idealism; by F. Frederichs. XVI. On the Logical Question; by G. Biederman — *H. Ulrici.* XVII. Pangenesis: a New Hypothesis of Charles Darwin — *F. A. Hartsen.*

*Volume 58.* — Art. I. On Schleiermacher's Philosophical Theology — *Dr. W. Bender.* II. On the Nature of the Spirit of Humanity: a Critical Consideration of the Fundamental

Idea of National Psychology—*E. v. Hartmann.* III. On the Distinction between Genuine and Spurious Writings attributed to Plato—*E. Schaarschmidt.* IV. The Science of Space, Time, and Mathematics, in Modern Philosophy; its Influence Examined: by Dr. J. J. Baumann—*Dr. Erdmann.* V. Les Sciences Humaines: Philosophie, Medicine, Morale, Politique; par Th. Funck-Brentano—*Dr. Reichlin-Meldegg.* VI. La Pensée Exacte en Philosophie; par Th. Funck-Brentano—*H. Ulrici.* VII. Synesius of Cyrene; by Dr. R. Volkmann—*Dr. A. Richter.* VIII. What Advantage has Berkeley's Doctrine over the Common View?—*Dr. R. Hoppe.* IX. My Defense against the foregoing—*H. Ulrici.* X. On the Possibility, the Goal, and the Limits of Knowledge; by Dr. W. Kaulich—*Dr. Hayd.* XI. Continuation of Article III. XII. On the Idea of Right; by Dr. H. Gunther. XIII. Book Notices.

II.

"The Thought" (*Der Gedanke*), "a journal of scientific investigation and criticism, organ of the Philosophical Society at Berlin, edited by Dr. C. L. Michelet and Dr. J. Bergmann, Secretaries of the Society," was published in Berlin from 1860 to 1867, the seventh and last volume of the same appearing in the latter year. Professor Michelet retired, and Dr. Bergmann edited a new journal called the "Philosophische Monatshefte," which has now completed four volumes. The contents of the last volume of "Der Gedanke" are as follows: Art. I. Where do we now Stand in Philosophy?—*C. L. Michelet.* II. Review of three Treatises on the Relation of Metaphysics to Natural Sciences—*A. J. Bergmann.* III. Anti-Critique on "Nature-Study and Culture"—*Schultz-Schultzenstein.* IV. Necrology (Henning, Pfluel, Cousin)—*C. L. Michelet.* V. The Professors of Philosophy in the University of Berlin. VI. Historical-philosophical Survey—*C. L. Michelet.* VII. Proceedings of the Philosophical Society. VIII. The Real and the Ideal—*J. Bergmann.* IX. The Scientific Establishment of the Musical Intervals, by Hartmann and Helmholtz—*G. Engel.* X. Zirngiebl: Jacobi's Life, Poems, and Thoughts—*C. L. Michelet.* XI. Kirchmann's Popular Philosophical Lectures. XII. Christianity and Modern Culture—*Robert Schellwien.* XIII.

A. Vera—*Karl Rosenkranz.* XIV. Review of Two Writings on the Freedom of the Will—*J. Bergmann.* XV. August Böckh—*G. Wolff.* XVI. Reminiscences of Adolph Diesterweg—*E. Mätzner.* XVII. Dr. Otto Lindner—*E. Hiersemenzel.* XVIII. Odysse-Barot: Letters on Philosophy of History—*K. Rosenkranz.* XIX. Dom Deschamps, a Forerunner of Hegelianism in the French Philosophy of the 18th Century—*K. Rosenkranz.* XX. Langenbeck's Examinations of the Theoretical Philosophy of Herbart and his School—*J. Bergmann.* XXI. Book Notices: The Aim and Significance of Marriage according to Plutarch—*F. A. Märcker;* Spielhagen on Humor and Satire; Lessing and the Transmigration of Souls; The Journal of Speculative Philosophy in St. Louis—*K. Rosenkranz;* Schopenhauer's Judgment of Women. XXII. Correspondence: Drossbach and Michelet concerning the Atomistic Metaphysics; Starke and Michelet concerning Immanence and Transcendence; Krauth and Michelet concerning the Relation of Marriage and Contract; Iwan Germak and Bergmann concerning "The Real and Ideal."

"Philosophische Monatshefte," contents of *Vol. 1, No. 1.*—I. Critical Basis of Metaphysics—*J. Bergmann.* II. Freedom or Communism—*R. Schellwien.* III. Diderot again—*K. Rosenkranz.* IV. Literary Review and Chronicle.

*No. 2.*—I. Freedom or Communism. II. Immortality Question—*Julius Frauenstädt.* III. Speculative Philosophy in the United States, Journal of Speculative Philosophy—*E. Mätzner.* IV. Chronicle.

*No. 3.*—I. Freedom or Communism—*R. Schellwien.* II. On the Spiritual in its First Difference from the Physical in the restricted sense—*H. Langenbeck.* III. A Correction of the Text of Leibnitz—*A. Richter.* IV. Literary Reviews and Chronicle.

*Nos. 4 & 5.*—I. August Böckh as a Platonist—*Ernst Bratuscheck.* II. Freedom or Communism—*R. Schellwien.* III. Literary Reviews and Chronicle.

*No. 6.*—I. The Act of Thinking considered in a Realistic Manner—*J. H. v. Kirchmann.* II. Exposition and Critical Explanation of the Last Apology for Baader—*J. Frauenstädt.* III. Literary Reviews and Chronicle.